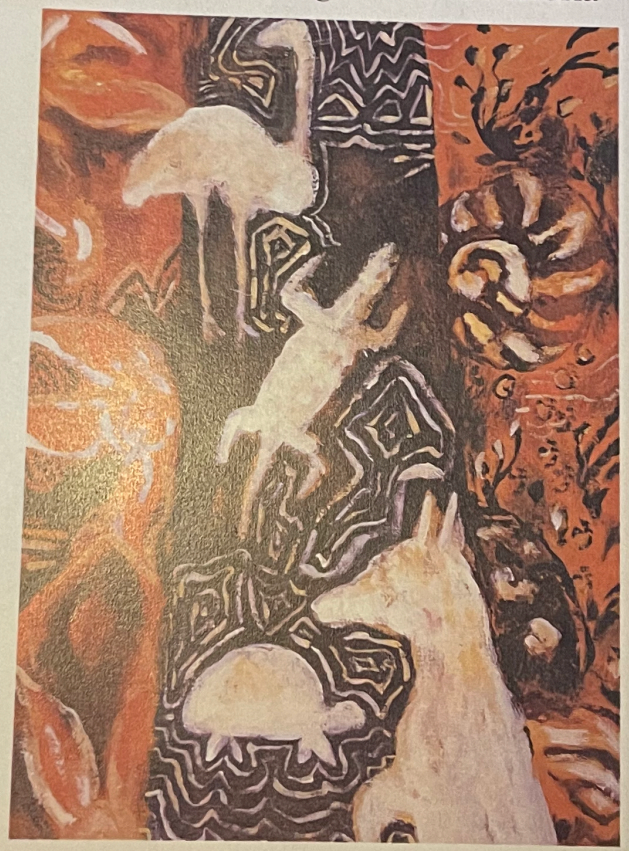
KOORIE PLANTS KOORIE PEOPLE

Traditional Aboriginal Food,
Fibre and Healing Plants of Victoria



Nelly Zola and Beth Gott

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Traditional Aboriginal Food,
Fibre and Healing Plants of Victoria

Koorie Heritage
Trust Inc.

Nelly Zola and Beth Gott

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Also available from the Koorie Heritage Trust:
Koorie - A book about the history and culture of the Aboriginal people of Victoria. Based on the exhibition at the Museum of Victoria and containing many of the same photographs.
Bush Tucker video.
Koorie - 10 songs by Archie Roach on audio cassette.
Three Civilised Evils - Posters and postcards featuring the work of Aboriginal artist Les Griggs.
Postcards of traditional Aboriginal life.

Cover illustration:
Flourishing
Belle Martin 1990
Collection: Koorie Heritage Trust

Belle Martin was born and raised at Cummeragunja. She studied art at the Northern Rivers College of advanced Education and now lives with her husband and child in Gippsland. Of her painting she says "The angular and geometric patterns are characteristic of south-eastern Koorie art as found on weapons and implements. The bush tucker, healing plants and seafood are woven into the designs. I hope it speaks of the interconnectedness of the wholistic lifestyle that our people lived in the flourishing environment that was Australia".

Half title page illustration:
East Gippsland Bush
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Title page illustration:
The Hunt
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City of Melbourne

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Contents

Foreword

Every time I learn that someone has written an article or book about my people's dietary habits and lifestyle I shudder because some non-Aboriginal people still don't know there is a need to listen to what my people have to say, to be able to understand the importance of nature and all it has to offer. But books like this one help to keep Koorie culture alive. Many of our Elders from various Koorie tribes in Victoria have been consulted and they have contributed much to its authenticity.

We are called hunter-gatherers. I believe our ancestors were hunter-gatherers and warriors, but they were also farmers, never destroying vegetation in any one area, making sure that plenty was left for others the next time around.

Some of the plants written about, Old Man Weed for example, which was used for anything from a headache to a tummy ache in the past, are still used today. Many types of grass and reeds are still used to make various kinds of baskets and vessels. Elders in the Koorie community are this very day teaching our young people to keep this part of our culture alive.

It is quite funny to think that Koorie people were good farmers and to realise that western farmers were the people who changed the environment with their grazing animals which ate up many of the natural foods in the ground.

I would encourage the readers of this book to use the contents as a resource and as a means of addressing a much healthier lifestyle.

Joan Vickery

Joan Vickery - Gunditjmara
Diabetes Education Co-ordinator
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Uncle Banjo Clarke, *Gunditjmara*, Framlingham
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Don Chatfield, adopted *Gunditjmara*, N.S.W.
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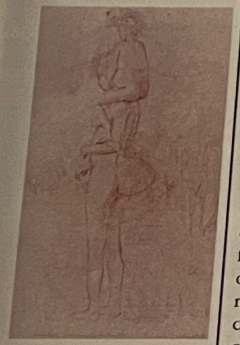
A note on Aboriginal surnames:
Aboriginal family names in south-eastern Australia are generally derived from the names of European farmers on whose properties Aboriginal people were employed in the early days of colonisation. Traditional Aboriginal names were thought to be too difficult to pronounce and renaming was a part of the drive to replace Aboriginal culture. Koories today can usually tell where people are from by the surnames they have, for example the Mongta, Hood, Carter and Thorpe families of Gippsland, the Wandin and Swindle families of Healesville, the Kennedy and Marks families of Horsham, the Wise, Moore and Murray families of Swan Hill, the Brabhams and Maddigans of Mildura and the Pettits and Handys of Robinvale.

The following map shows areas belonging to each of the Aboriginal peoples of Australia's south-eastern corner. Koories today still identify strongly with their "home country" - the place their people lived in before European invasion.

Map of Aboriginal Victoria showing dialect (tribal) groupings. The shaded areas mark major linguistic divisions. The boundaries are only approximate and the spelling of Aboriginal names based on N.B. Tindale's Aboriginal Tribes of Australia, *1974, and R.M.W. Dixion,* The Languages of Australia, *1980. Reproduced Courtesy of ATSIC.*

INTRODUCTION



Explorer Thomas Mitchell's drawing of the Aboriginal woman Turandurey and her child, dated 10 May, 1836. Before joining Mitchell's party, she and her baby were slender and obviously healthy. After six months of flour and rations and little exercise, she was said to have "grown enormously fat," an early inditement of the effects of poor western food on the indigenous people of Victoria.

When they lived traditionally as hunter-gatherers before European colonisation of Australia, Aborigines were omnivorous, deriving their diet from a wide range of uncultivated plant foods and wild animals, Their successful survival depended on an intimate and detailed knowledge of the land, sources of fresh water, and the impact of the annual cycle of seasonal changes on the flora and fauna of their territory.

The detailed and thorough knowledge the Aborigines had of the ecology of their environment allowed them to take full advantage of a wide range of plants as sources of food over the year - tuberous roots, seeds, fruits, nuts, gums, nectar. Cereal grains, the dietary staples of man since the development of agriculture, were not usually a major component of the traditional Aboriginal diet in South Eastern Australia.

Relative to many of their cultivated forms, wild plant foods are particularly rich in protein and vitamins. For example, a species of wild plum eaten by Aborigines in northern Australia (Terminalia ferdinandiana) has the highest vitamin C content of any known food (2-3% net weight!). A commonly eaten yam in northern Australia (Dioscorea transversa) is considerably more nutrient-dense than its modern equivalent, the potato, being higher in carbohydrate, protein, fibre, zinc and iron. The wild vegetable foods are also rich in dietary fibre, low in sodium, but rich in potassium, magnesium and calcium. The seeds which made significant contributions to the diet of Aborigines in certain areas were not only rich in protein, but also contained significant quantities of polyunsaturated fat.

The carbohydrate in many of these traditional foods has been shown to be more slowly digested and absorbed than the carbohydrate in equivalent domesticated plant foods. These slowly digested wild plant foods may have helped protect Aborigines from developing diabetes - although other factors, in particular their low fat, high fibre diet, and their leanness and physical fitness, were undoubtedly also very important.

Methods of food preparation utilized by Aborigines generally resulted in minimal loss of nutrients - particularly micronutrients. Many plant foods were eaten fresh and raw - frequently as they were collected - fruits, bulbs, nectar, gums, flowers etc. Foods were not processed

unnecessarily. Any processing was carried out to render a food edible, more digestible or more palatable: for example, cooking of starchy tubers or seeds, grinding and roasting seeds, cooking of meat.

All available evidence indicates that, when Aborigines lived as hunter-gatherers they were lean and physically fit, and free of the epidemic of "lifestyle diseases" which plague them once they make the transition to a sedentary, westernised lifestyle. Obesity, diabetes and coronary heart disease occur at alarming frequencies in Aboriginal communities all over the country. Diabetes is a particularly serious problem. In the 20-50 year age-group, the prevalence of diabetes is more than ten times higher in Aborigines than in Australians of Europeans ancestry.

The question must be asked - if lifestyle change causes diabetes in Aborigines, can it be treated by reversing the process?

This was the idea behind a study in 1982, when 14 Aborigines from a remote community in Western Australia, ten with diabetes, and four without, participated in a study which saw them revert to the traditional lifestyle. This study was only possible because these people had retained the knowledge and ability to live successfully as hunter-gatherers - despite living a sedentary, westernised lifestyle in the years prior to this study.

Metabolic tests were conducted before and after seven weeks of living off the land. The results were striking, with a marked improvement in all the metabolic abnormalities of diabetes, plus a reduction in a number of risk factors for heart disease. Seven weeks of traditional lifestyle were enough to substantially reverse a disease which took years to develop in the urban environment. The public health implications are enormous. Not only is diabetes potentially reversible in Aborigines, but potentially preventable as well. The results of the study are a dramatic illustration of the relationship between lifestyle and health.

There were three major components of traditional lifestyle which would have contributed to the improved metabolic control - regular physical activity, low fat, high fibre diet and weight loss. These three factors are all a natural part of the hunter-gatherer lifestyle and in the urban context all have to be addressed separately. The epidemic of lifestyle diseases such as diabetes in Aboriginal communities justifies the development of community-wide programs aimed at treatment and prevention. Prevention is better than cure and the cluster of lifestyle diseases such as obesity, diabetes, hypertension, cardiovascular disease and hyperlipidemias will all respond to changes in diet and exercise.

The challenge for Aboriginal communities is to devise appropriate strategies to encourage health-promoting change and the key is that such programs be designed and run by Aborigines. Unless Aborigines "own" such programs, it is unlikely they will be taken up over the long term. The success of the "back-to-the-bush" study was probably due in part to its "Aboriginality".

These observations have implications not only for the prevention of obesity, diabetes and cardiovascular disease in Aborigines, but can also be applied more broadly. It has been argued that the hunter-gatherer or paleolithic diet and lifestyle is the one to which we as modern humans are genetically programmed, as the human genetic constitution has changed little in the past 40,000 years since the appearance of modern man. Thus, it is to this diet and lifestyle that we should turn when seeking explanations for and solutions to the characteristic pattern of chronic diseases which emerges in all populations when they become more "affluent" economically and adopt a sedentary, westernised way of life.

It is essential that the details of the Aboriginal hunter-gatherer diet and lifestyle be thoroughly documented where it is still possible. Increasingly its relevance , or "therapeutic potential", in relation to many of the contemporary health and social problems of western societies is being recognised. This book represents an extremely important contribution to such documentation for south eastern Australia - a region which undoubtedly supported the highest density of Aborigines prior to European colonisation.

Kerin O'Dea

Professor Kerin O'Dea,
Department of Human Nutrition
Deakin University.

PREFACE

"The white people came here and they wanted that grazing land for stock. The Aboriginals were pushed off their land - they didn't understand why. All the native food was being destroyed. They destroyed everything native as no good.

Aboriginal people were getting pushed off their land no matter where they went. They weren't allowed to go on the land, the places where they'd roamed for thousands of years. Then all the trouble started."

Uncle Banjo Clarke

In the years since the south-east of Australia was invaded and colonised by Europeans, enormous changes have been made to the landscape. From the 1830s onward, where once the various Aboriginal peoples of Victoria had fished, hunted and gathered plant foods and shellfish, the Europeans established their vast cattle and sheep runs, built their towns and cities and laid their railroad tracks.

To feed their stock, they cleared tracts of forest, drained swamps, diverted rivers and replaced native grasses with imported crops and pasture plants. Soft footed Australian animals like kangaroos and wallabies were suddenly joined by millions of horses, sheep, cattle and pigs, whose hard hooves destroyed the fragile native plants which were Aboriginal staples and muddied and finally eliminated precious water holes and soaks.

This rapid pastoral development had an immediate and tragic impact on the Aboriginal population, altering for ever a system of land management which had existed for thousands of years. In a matter of one generation, it became almost impossible for Victorian Aborigines to obtain their food in the traditional way. European farmers moved onto land belonging to Aboriginal clans, claimed exclusive rights to all its resources, and forbade Aboriginal owners access to plants, animals and water. When Aboriginal people defended their rights, attacked the invaders or turned to stealing cattle and sheep, their actions were labelled as crimes.

A fierce war for land and resources was fought over much of Victoria, lasting for many years. Coming from an agricultural, recently industrialised society, the colonists brought with them an imperious sense of superiority and a set of attitudes and practices in relation to land which made it difficult for them to understand the very different culture and economic system of the indigenous peoples of Australia.

While the Europeans argued that only by fencing property and tilling the soil did people prove that they owned the land, the Aboriginal people of Victoria in fact had a continuous history of

occupation of their country of over 40,000 years. For at least 2,000 generations, through climatic and geological upheavals, they had sustained themselves by managing and harvesting the available resources of south-eastern Australia.

Within what is now known as Victoria, there were 38 separate language groups, and within each of these large connected language groups or nations were many clans. Each clan had its own territory. No one owned the land; it was cared for, both physically and in numerous ritual and spiritual ways. Its resources were used and occasionally shared with other groups.

Throughout Victoria's many different environments, across the open forests and plains, around swampy marshlands and along the river valleys and the coastal strip, Aboriginal people had developed effective and economical means of hunting, fishing and collecting a wide variety of vegetable foods.

Unlike societies dependent on agriculture, where a limited number of crops are produced by a few people to feed the whole population, people here obtained their nourishment from a great variety of naturally occurring foods. In Australia's temperate south-east, there was no need to produce surplus, since food was available all year round, and could be obtained relatively quickly and easily. Nevertheless, there were ways to increase access to food supplies, render them more reliable and ensure replenishment, and all of these were practised.

The most important management tool was the use of fire. Where to burn, when to burn, and how the bush would respond was knowledge passed down from generation to generation. For tens of thousands of years, the bush was burnt in sections and the fire carefully controlled. Since old dead vegetation was not allowed to accumulate, the fires were never so fierce as to be unmanageable. Some of the open plains and stands of important plants such as Cumbungi were probably burned almost every year, but lightly forested areas were burnt less often, while high mountain forests probably not at all.

This burning had many effects. Regular firing maintained an open structure in the forest, with plenty of sunlight coming in to encourage the growth of new seedlings. Fertilising ash from the fires was returned to the soil, seeds germinated in the ash bed, and the burnt trees and shrubs resprouted. Grazing animals and birds attracted into the area to feed on

Aboriginal controlled burning maintained Victoria's plains as open hunting grounds for native game. Kangaroos, along with wallabies, bush turkeys and emu were an important part of the diet.

the new shoots and young plants could be hunted more easily in the open country

Selective firing favoured useful plants at the expense of others. Thanks to Aboriginal burning, most Australian vegetation has adapted so that not only does it recover quickly after a fire, but burning also stimulates its growth.

The green, lightly wooded country which Europeans saw and admired when they arrived had been extensively modified by centuries of Aboriginal management. Even the unusually soft and absorbent nature of the soil, a quality which quickly changed as sheep and cattle were introduced, was the result of Aboriginal women turning over and loosening the earth in their daily foraging for root plants, the most important staple food for people in Victoria.

Parties of women and children regularly collecting Murnong (Yam Daisies) and other tuberous plants with their digging sticks aerated the soil and thinned out clumps of roots. Tradition has it that they were always careful to leave some of the plant in the earth to ensure a continually renewed supply.

In parts of the western district, people also built extensive stone and earth channels for re-directing water and catching fish and eels. These fisheries were built to harvest the huge numbers of eels swimming downstream every summer to the sea, and ensured a plentiful and reliable food supply for many months of the year. The Watiwati and other clans along the Murray also built fish traps across the river's drainage channels enabling them to easily capture fish as the Murray flood waters subsided.

In the main, women collected the vegetable foods and caught small animals, while men hunted large game. Parties of hunters and foragers would set out each day, the younger children going with their mothers, and depending on the season and the type of country, be out for 4 to 6 hours. During the day, there would be time for talking, resting, eating snacks, and teaching children the best places to find tasty berries, roots or grubs. Since everyone was involved in providing the food which was shared, each person needed to learn the skills necessary for successful hunting or foraging. At the end of the day, people arrived back at their base camp to cook their evening meal in the ashes of the camp fire or in a ground oven.

Aboriginal people lived a rich and generally comfortable life. They made use of abundant natural resources, and had time to pursue cultural, spiritual and leisure activities. Because they moved frequently, they had no need for and did not value cumbersome material possessions, but relied instead on a few carefully designed tools and weapons which answered all their needs. Their most important resource was the knowledge and skill of each member of their group.

Early accounts by the first Europeans of people still living from their traditional resources make it plain that Aboriginal people in south-eastern Australia were vigorous and healthy. There are many admiring descriptions by early English settlers of tall people with well proportioned limbs who were graceful, agile and strong. Their stamina and ability to recover from severe injury was judged to be far greater than that of the Europeans.

Far from being deprived or undernourished, Aboriginal people then had the kind of diet we are now all being encouraged to follow. They ate plenty of fresh fruits and vegetables, fish and shellfish. The meat of their native animals and wild birds was much leaner than mutton, beef, or pork, with a higher proportion of healthier polyunsaturated fat. Their daily regime involved walking, and other kinds of physical effort. Everything they needed to accomplish they did themselves, without resort to machinery or pack animals.

As European farming disrupted the various traditional Aboriginal economies and native foods disappeared, Aboriginal people sought out equivalent plants and adopted imported foods into their diets. As early as 1870, for example, there are reports of people eating Flatweed instead of the Murnong which was harder and harder to find. European fish like Redfin and Tench, European watercresses and thistles, rabbits and hares quickly became part of the new bush tucker. Aboriginal people's adaptability was an important part of their survival.

When some of the people who contributed to this book, Koorie community Elders like Elizabeth Hoffman, Connie Hart, Colin Walker and Banjo Clarke talk about the old days, they are recalling traditions already changed by the time they were born. As children they hunted and fished, gathered wild honey and bush fruits, but they also enjoyed damper and grew European vegetables. Families maintained their Aboriginal culture however they could while absorbing much that was new.

The country near Yan Yean still retains a mixture of grasses and Eucalypts. Cleared of undergrowth by generations of Aboriginal hunters and cultivators, the plains looked like parklands to the first Europeans who saw them.

Today there is a wide community interest in Aboriginal history and culture which springs partly from a heightened appreciation of and concern for the environment. People are beginning to count the costs of 200 years of agricultural and pastoral land use in soil erosion and salination. Industrialisation has polluted rivers and bays and overfishing has depleted once teeming water resources. The deterioration of the natural environment over the brief period of European occupation contrasts unfavourably with the Aboriginal peoples' long term management of resources. They too modified the environment, yet their methods maintained the integrity of the land while making the best use of what it had to offer.

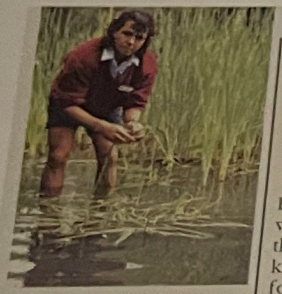
It is clearly no longer possible for Victoria's large urbanised population to live by hunting, fishing and gathering native fruits and vegetables. Nevertheless, people are beginning to value the unique flora and fauna of this region. Respect for and identification with the land and its plants and animals, always an integral part of Aboriginal culture, is something the wider community is gradually coming to share. In many land management and regeneration schemes, Aboriginal advice is now being sought. In spite of the dislocation of Aboriginal society, a few people in each community are still able to pass on knowledge about the natural world which was once part of everyday Aboriginal life.

This book has been designed as a reference for people wishing to identify some of the Victorian native plants important to Aborigines. It contains photographs of 100 of the approximately 900 plants known to have been used by Aboriginal people in Victoria up to the 1830s. Many plants had multiple uses. In some cases, one part of the plant was eaten, while another part was used for medicine, resin or fibre. These additional uses have been included, as well as any known Aboriginal names.

Because vegetation in Victoria has been radically altered by farming, many of the listed native plants are now quite rare. Remnants of native vegetation in many areas have a fragile hold and are in the category of endangered plant species. A significant number are protected by law. This book will help you identify them, but please do not disturb or destroy them.

Some of the best places to see Aboriginal food and medicinal plants are in specialist nurseries or native plant gardens such as the one at Monash University. A list of such gardens is included at the end of this book.

Gathering Food Plants



Tim Chatfield, Cultural officer at the Brambuck Aboriginal Centre at Gariwerd (Hall's Gap) with Cumbungi and Water Ribbon roots pulled up from the creek. Aboriginal women gathered these vegetables for their families every day.

Every day, just as the men planned their hunts, the women would decide where they should go to gather the fruits and vegetables which were in season. Their knowledge of where and when food plants could be found, of how to locate underground tubers in summer when no part of the plant remained above the surface, was just as important as the men's ability to read the tracks of animals or their skill with spears and clubs. Meat was enjoyed whenever possible, but people depended for their sustenance on the vegetables, small game, frogs, shellfish and fruit that women collected each day.

Aboriginal women provided 50 to 80% of their family's food. Their foraging expertise gave them independence and played a primary role in maintaining the health and wellbeing of their people.

The most consistent source of nourishment, available all year round was found in the roots of numerous lilies and orchids and tuberous water plants which were once plentiful in Victoria. Unlike fruit, tubers and roots are generally safe from animals and birds. Plants can store starch and other nutrients in their roots for months, sometimes years underground where the wind and sun can't destroy them.

Many early reports in particular mention the importance of Murnong, or Yam Daisy to Aboriginal people. It was probably the most relied upon staple food throughout Victoria, growing abundantly on lowlands and up to the snowline in the eastern highlands. It was also one of the first plants to disappear when sheep and cattle were introduced.

James Dawson a pioneer settler in the western district and a sympathetic observer of Aboriginal life wrote:

"Of roots and vegetables they have plenty. The muurang, (Murnong) which somewhat resembles a small parsnip, with a flower like a buttercup, grows chiefly on the open plains. It is much esteemed on account of its sweetness, and is dug up by the women with the muurang pole. The roots are washed and put into a rush basket made on purpose and placed in the oven in the evening to be ready for the next morning's breakfast. When several families live near each other and cook their roots together, sometimes the baskets form a pile three feet high."

Other plants which were widespread and abundant enough to be staples were the lilies and orchids, all of which had edible tubers. The roots of Bracken Fern, Cumbungi and Water Ribbons, all vigorous and prolific growers, were also eaten as a regular part of the diet where Murnong was not available. Cumbungi in particular was a staple along rivers and creeks and all along the Murray.

Murnong tubers and flowers from Reedy Lake. Murnong tubers are probably smaller now that the plant grows in less favourable environments.

TWO STAPLES - MURNONG AND CUMBUMGI
MURNONG, YAM DAISY Microseris lanceolata
MURNONG *Wurunjeri*, Geelong
MUURANG, KEERANG *Gunditjmara*
PUN'YIN root *Tjapwurong*

Far more than any other plant, Murnong is mentioned in early accounts as being an important food for people in southeastern Australia. Its rapid destruction by sheep and cattle was a terrible loss to the Aborigines who depended on it. Where once there were "millions of murnong or yam all over the plain" (a settler's description from north-central Victoria, recorded in 1840), it can now be found only in isolated small patches. Historical accounts of Murnong from the 1840s onwards show it to have been widespread across all regions of Victoria, but most abundant on the open plains.

This patch of Murnong was grown at the Monash University Garden. The rapid eradication of Murnong from the 1840s onwards was remarked on by the squatter Edward Curr:

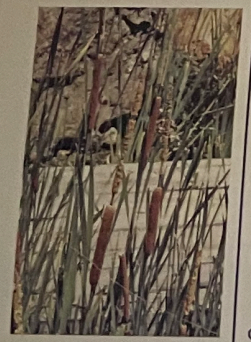
"At Colbinabbin, (near Echuca), yams were so abundant, and so easily procured, that one might have collected in an hour, with a pointed stick, as many as would have served a family for the day. The wheels of our drays used to turn them up by the bushel as it went over the loose ground. Indeed, several thousand sheep, which I had at Colbinabbin, not only learnt to root up these vegetables with their noses, but they for the most part lived on them for the first year, after which the root began gradually to get scarce."

Those same plains by 1843 were being grazed by close to one and a half million sheep which not only dug up the Murnong roots with their noses, but trampled and hardened the soil so that it no longer supported the regrowth of the plant. After 1859, the arrival of the rabbit added to the depredations of sheep, cattle, pigs and horses.

Murnong flowers look a lot like the flowers of the common yellow Dandelion which grows as a weed in suburban gardens. Just like the Dandelion, it exudes a milky white sap when any part of it is cut. The tubers are either round, like a radish, or long and tapered like a small carrot, to which it was sometimes compared by Europeans. During the summer, the tuber remains dormant, but after the autumn rains, a circle of leaves sprouts up and it is from these leaves that the plant begins to form a new tuber while the old one shrivels and becomes bitter. At this stage, if all the leaves are eaten, the plant cannot regenerate.

The tubers can be eaten raw but were most often cooked in baskets. Uncooked, they are crisp and bland, but when roasted they produce a sweet syrup and and are very good to eat. The syrup was called MINNE, while the cooked roots were called TALOOM by the *Tjapwurong* or YUWATCH by the *Gunditjmara*. It used to be thought that the same plant grew larger tubers in higher altitudes, but the Alpine Murnong is actually a different species, Microseris scapigera, with a more fibrous but still edible root.

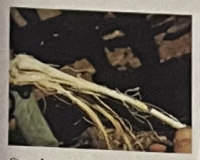
Murnong was gathered by women using digging sticks. Children could easily help, since the tubers are not deep underground and can be dug up with little effort. The nutritional value of Murnong is still under investigation but preliminary analysis of fresh tubers shows them to be a potentially significant source of energy. The Murnong tubers do not contain starch, but store their carbohydrate as "fructosan", which is digested differently to starch through a process of fermentation.



Cumbungi with its characteristic brown rod-like spikes. Explorer Thomas Mitchell described how after baking lengths of Cumbungi root, twisting and loosening the fibres, "a quantity of gluten, exactly resembling wheaten flour, may be shaken out, affording at all times a ready and wholesome food".

CUMBUNGI, REED MACE Typha species "Bulrush"
Lake Boga names:
GANG
GUMBUNG Rush root
WANGULL Rush root, old, water gone
BOORTICH Rush root, old, after cooking
JEERK Root, old, after fibre is extracted
Tyntynder name:
JONTIE Young flower-stem, eaten raw.

Cumbungi grows in great abundance along the edges of rivers and lakes and was the most important plant food in the Murray-Darling river system. Two parts of the plant



Starchy white root of Cumbungi collected by Aboriginal people along the river systems as a staple food. It was eaten after cooking and peeling.

were eaten - the new summer shoots and the underground stems (rhizomes), which are rich in a potato-like starch. The new shoots were collected and eaten as a salad, while the very fibrous roots were roasted first, then peeled, and the white centre of the root chewed. The fibre which remained after all the starch had been eaten was twisted and made into string.

The early settler Beveridge noted quite accurately that Cumbungi is hard work to dig up:

"They have a farinaceous root which grows abundantly on the marshes; it is very nutritious and quite as palatable as the best potatoes. It can be got in any quantity, but it is hard work digging it up, therefore it is not often procured. The fibre of this root they make into fishing lines and nets; it is very strong, and lasts very long in the water without rotting. They make duck nets of this fibre also 50 or 60 yards (180 metres) in length."

This is the deep yellow daisy-like flower of Murnong, Microseris lanceolata.

Fiery Creek where it flows into Lake Bolac. The water plants which Victorian Aborigines most commonly used for food can be seen here growing together. Water Ribbons lie on the water's surface while Cumbungi and Reeds line the creek edge.

Living Water

Rivers and streams, lakes, swamps and waterholes provided essential drinking water, as well as being the richest of all food environments.

Wherever rivers intersected the landscape, people set up camps close to the banks. Along parts of the Murray, the supply of fish and other foods was so varied and abundant, that people like the Wati Wati, the Wemba Wemba and Kwatkwat led semi-sedentary lives, only infrequently having to move in pursuit of other resources. Where there was water, there were fish of all kinds, yabbies and shellfish, frogs, snakes and lizards as well as parrots, swans, wild duck and other water birds and their eggs. Animals coming to drink could be snared or speared. Water plants like Cumbungi and Water-ribbons grew abundantly and were easy to collect.

"There were so many fish - cod and yellowbelly, and redfin used to be alright. There are no more trout cods in the river, only in the small streams. We could fish going through the lakes. You'd be going in a small boat, just gliding slowly with a spear in your hand. You'd see a fish and bang! Take him home, straight on the fire.

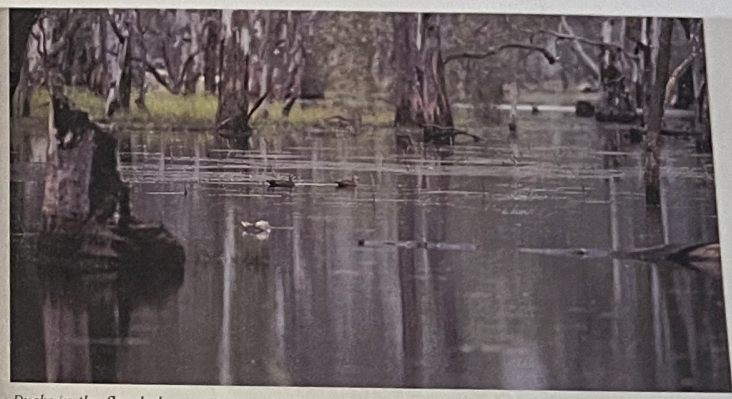
Now you can't get any more fish. Too much mud in the river, too much salt. And where we'd go at the back of the lakes for swans' eggs and ducks, there's no more, no good any more. There's too many boats up there now, boats and people."

Wally Cooper

Victoria has lost many of its marshes and swampy wetlands. In what are now urban areas, they have vanished without a trace. G. G. McRae, writing of Melbourne in the 1840s, for example, recalled that the Spencer Street railyards were once:

"...a beautiful blue lake. You may search for it in vain today among the mud, scrap-iron, broken bottles and all sorts of red-rusty railway debris ...a real lake, intensely blue, nearly oval, and full of the clearest salt water; but this, by no means deep. Fringed gaily all round by mesembryanthemum (pigface) in full bloom, it seemed in the broad sunshine as though girdled about with a belt of magenta fire. The ground gradually sloping down towards the lake was also empurpled, but patchily, in the same manner, though perhaps not quite so brilliantly, while the whole air was heavy with the mingled odours of the golden myrnong flowers and purple fringed lilies, or ratafias. I often used (this was in 1841) to visit this lake along with my father on his shooting expeditions, in the early mornings, surprising the numerous wild-fowl that frequented its margin or waded about unconcernedly in its waters. ...Years have passed since the days when it was a swamp even - and now not a single trace of the lake or its former contour remains."

Rivers and wetlands with their abundant plant and animal life once supported the greatest concentrations of Aboriginal people in Victoria.



Ducks in the flooded Barmah Forest. Rich black silt is washed across low lying forest when the swollen Murray River overflows its banks.

FOREST FLOOD PLAINS

Life along the Murray and its tributaries and lagoons must have been leisurely and enjoyable for the Aboriginal tribes and clans of the Murray Valley. The river and its flood plains supported a multitude of plant and animal life. Great River Redgums and Black Box lined the banks making a cool canopy in summer, and supplying bark for canoes and shelter.

One of the first squatters on the Murray, Hugh Jamieson observed that. .."*the suppy of food here is by no means precarious. During many months of the year, the waters of the Murray and Darling furnish an immense supply of fish; at other seasons of the year, edible roots in great variety are plentiful, even in the interior and more northern parts of the Darling."*

He complained that the Aborigines on his station could not be persuaded to stay during the summer, but preferred instead to join with people from other tribes along the Lower Murray and Darling... "*alternately hunting, fishing, and levying contributions on both sheep and cattle, as they slowly and indolently saunter along the banks...*"

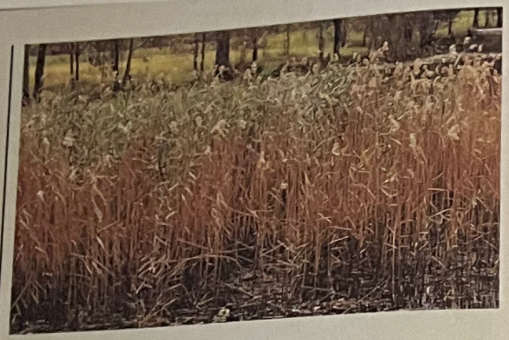
The life of the river was highly seasonal. Before irrigation systems were put in, waters from the melting snow in the highlands rushed downstream and spilled over into the floodplains, revitalising and replenishing the plant and animal life of the riverine region. This flooding occurred almost every year.

The Murray River was celebrated in Victorian Aboriginal creation stories, one of which tells of a giant serpent which wound through the landscape at the command of the great creator, Biamie, and formed with its body the serpentine river valley.

"You come down alongside the river and you've got eveything there. Aboriginal people had a simple lifestyle but effective. Everything had its purpose. Like the river - it gave us plenty. It gave us the banks for our clay and plenty of fish and wildlife. It was something that was important to us. The forest, this Barmah Forest was a great place for our ancestors to live. There was plenty of wildlife, plenty of waterfowl, plenty of everything."

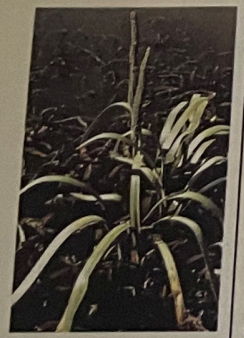
Wally Cooper

Feathery flower stems distinguish the Common Reed. These were photographed near Barmah.



WATER PLANTS
COMMON REED Phragmites australis
DJARG *Wemba Wemba*
JAARK Lake Boga
KAERK Reed, *Tjapwurong*
CHAARK Reed spear *Tjapwurong*
TAANG TAANG Nose reed *Tjapwurong*
TARK *Wathaurong*
TARK-KORN *Wathaurong*
KOURN BERT Reed necklace, worn by both sexes, Yarra (and lots of other names)

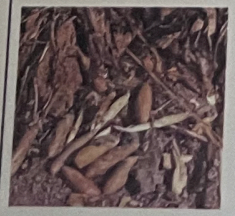
Roots of the common reed were eaten by Aboriginal people in Tasmania and most likely in Victoria as well. Unlike the floury Cumbungi root, the Common Reed is crisp and non-starchy and tastes rather like Bamboo shoots. Sections of reed were strung into necklaces and the straight flowering stems used as spear shafts.



The flowers and fruit of Water Ribbons are green and grow on a stalk above the water while the ribbon-like leaves float on the surface. Water Ribbons are found all over Australia and were eaten by Aboriginal people in the north as well as the south-east.

WATER RIBBONS Triglochin procera
NGARELI *Wemba Wemba*
POL-AN-GO *Wathaurong*

Water Ribbons are found throughout Australia in aquatic environments and are still eaten by Aboriginal people in northern Australia who live on a mixture of western and bush foods. The long slender leaves of the plant float on the surface of the water while the green flowering stalk stands upright. It sends down roots bearing many bulbous tubers which are crisp and sweet. The tubers were cooked in ground ovens and are easily collected. Even today, the bed of Condah Swamp is densely covered with this plant.



These Water Ribbon tubers were collected from the base of one plant.

The flower heads of Marsh Club-rush, a wide spread water plant in Victoria.

A Marsh Club-rush tuber, sliced to reveal the white tough and starchy interior.

"People knew the water was coming by the behaviour of birds and ants, ducks and swans. If we were down at the village now and we saw swans coming up this way, old people would say "a big river coming" because the swans were coming up to meet the water. And the ducks, at the mating season, ways like that, we could tell.

Aborigines really went by the nature of animals and how they acted when there was flood waters coming or storms or big rains. Ants building up, that's when big rains are coming. Cobwebs, how they lay in the grass and all that. All over, they knew they were part of the earth, they were part of the soil."

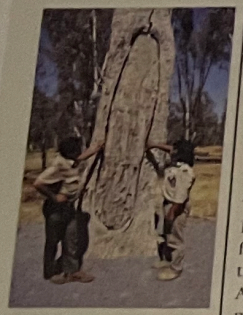
Uncle Colin

MARSH CLUB-RUSH Bolboschoenus medianus
WOORPERT Lake Boga (possibly)

Another plant which grows at the edge of rivers and lakes. Its round corms are best collected in summer, when they are white and young. The inside of the edible corm is very hard and impossible to eat without some preparation. Aboriginal women would roast the corms before pounding them between stones and baking them into starchy cakes.

This description by the explorer Edward J. Eyre almost certainly refers to Club Rush and gives some idea of its abundance:

"... another important bulbous root, which also grows on lands subject to floods. It is about the size of a walnut, of a hard and oily nature, and is prepared by being roasted and pounded into a thin cake between two stones. Immense tracts of country are covered with this plant on the flats of the Murray, which in the distance look like the most beautiful and luxuriant meadows. After the floods have retired, I have seen several hundreds of acres, with the stems of the plants six or seven feet high, and growing so closely together as to render it very difficult to penetrate far among them."



The oval scar on this majestic River-gum in the Barmah Forest still clearly shows where Aborigines removed a sheet of bark over a hundred years ago. Bark was a much used resource. Large sheets were cut for shelters and canoes, while smaller pieces were modelled into shields or water vessels. Examining the canoe tree are Leon and James Atkinson, both Cultural Officers at the Dharnya Centre.

RIVER RED GUM Eucalyptus camaldulensis
BE-AL Melbourne
BEEUL Lake Boga
BIAL Lake Hindmarsh, *Gunditjmara*
BIEL *Wemba Wemba* (many versions, also in western district)
DHARNYA *Yorta Yorta*
MOOLERR Wimmera

The most characteristic tree along waterways is the majestic River Red Gum. From the bark of these trees were fashioned the canoes used for fishing and transport along the river. Squatter Peter Beveridge, an early observer of Aboriginal life on the Murray wrote: "Their canoes are made from the bark of the redgum tree; bark of other trees is used, but merely for temporary use, as none but the former will stand the weather without curling up or splitting".

Red Gum was highly prized by Europeans for its hard timber which resists rotting. In Victoria it was extensively logged and cut up into railway sleepers and used for paving Melbourne streets, and for building wharves and piers.

The Murray near Swan Hill at sunset. Black Box trees grow just outside the high water line; River Red-gums cling to the river's edge.

Wally Cooper takes the wrapping off a fish cooked in clay, Koorie style.

COOKING

Aboriginal people cooked their food in a number of ways. Small fish, root vegetables, grubs, shellfish, or any other foods which can be quickly cooked were roasted in the ashes of the campfire. Larger food animals and quantities of vegetables were steamed in ground ovens. Kangaroos, possums, emus and other game were either baked whole, or cut into pieces. The entrails might be removed, and fragrant herbs placed inside before cooking.

Some plants needed processing before they could be enjoyed. For example, the Marsh Club-rush has round starchy corms which are very hard. They were first roasted whole, then pounded with stone and formed into thin cakes which were quickly cooked again. The fibrous roots of bracken fern, a widely used plant food also had to be first roasted and then broken up to release the starch from the fibre

There are some quite detailed descriptions of traditional cooking methods, written down by people who had a chance to observe Aboriginal life before it was severely disrupted. Edward M. Curr, a squatter in the Barmah area from 1841 to 1851 described it in this way:

"When there was food to be baked, the women, with their hands and yamsticks, scooped a hole in the mound; if in so doing they came upon any lumps of clay (for there was no stone in those parts), they roughly lined the bottom of the hole with them. If none were met with they quickly dug up a quantity for the purpose with their yamsticks, from somewhere near at hand. These lumps are were about twice the size of a man's fist. The bottom of the hole being lined with them, a fire was made on top of them, and on the fire were thrown more lumps of clay. When the fire had burnt down, these last lumps were removed to one side, and the hot embers to the other. The hole being thus cleared of everything except its flooring of hot lumps of clay, the latter were thinly strewn with grass, or leaves of a herb called pennyroyal, green if possible, and well damped with water. On this were laid, neatly packed, the animals or roots to be cooked; then came another coating of wet grass, next the remaining lumps of heated clay, then the burning embers. These were often covered with a

"I lived at Cummera and up along the river bank we used to live on possums that Grandfather trapped and cooked for us, beautiful tucker. Cooked them under the ashes. A bit of damper and possum and off to school again.

Traditional food was healthy because it's lean, very lean. They didn't use salt and there were hardly any sweets. It was just all hard clean tucker, and all cooked in its own juices."

Uncle Colin

"The turtle, he's good food, good tucker. When you cook him, the shells underneath open up. There's four little balls like gallstones that you pull out. We call them thunder and lightning. Once they're out, you can go for your life. They're simple and easy to cook."

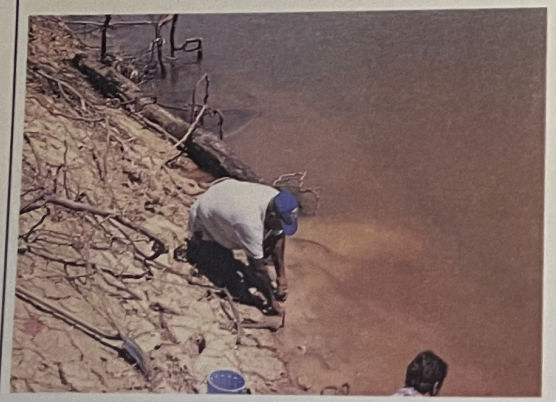
Uncle Colin

sheet of bark, and on top of all these was a quantity of earth. In an hour or two the food was taken out well-cooked and clean"

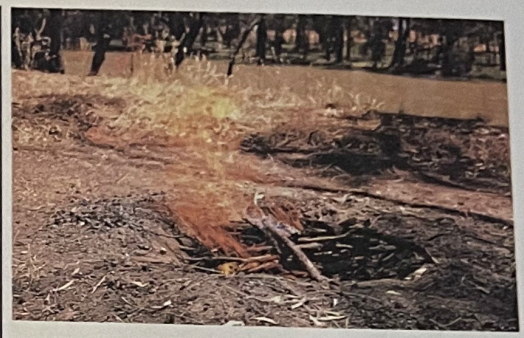
Stones were also used in ground ovens to absorb the heat of the fire and allow food to be baked or steamed slowly without burning it. In places where there were no stones, clay balls were used to do the same job.

Koories still enjoy a meal cooked in traditional style. Steaming food in a ground oven is a healthy way to prepare it. No extra fat or oil is added. The meat or vegetables are cooked in their own juices, retaining all their flavour. A variation of this method can be adopted in your kitchen, or it is not too difficult to try on a bush outing. We were able to see how it was done on the banks of the Murray at Cummeragunga. Wally Cooper, assisted by his children Kevin and Anita and Philip Harrison from Shepparton cooked Murray Cod and freshwater shellfish in a ground oven, first coating the fish with clay.

The first step is to dig a hole, big enough for the food you are cooking. After that you gather twigs for the fire. Small bits of wood are best because you don't want a blazing hot fire. A low burning fire puts more heat into the ground.



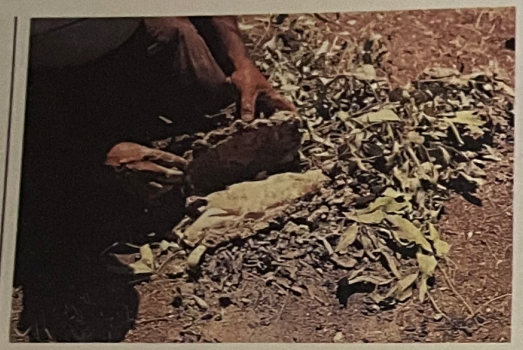
Next select your clay from the river's edge. The best clay lies just inside the water line, where the river washes it clean. Shape the clay into balls and place them around the edges of the fire to absorb heat for about three hours.



While the fire is burning down, there's time to prepare the food. Murray Perch and fresh water mussels are laid out on new Eucalyptus leaves.

Kevin, Anita and Phillip help to pack the fish and mussels in river clay. Wrapping small things like mussels and yabbies in clay keeps them from drying out while they cook.

Some of the hot ash is scooped out of the hole and the food to be cooked is placed about half way down in the pit. To even up the heat from the ground, a good quantity of hot ash needs to go on top.



After only about 25 minutes (longer for meat), the fish is ready to eat, beautifully moist after being sealed and cooked in its own juices.

A wide rocky ledge along the Otways coast, close to an Aboriginal midden. Rock platforms were favourite food gathering areas, providing a good selection of shell fish.

The Coast

"All over this coast area, they'd come here to have their food and their corroborees and tell each other yarns. People came to the coast in summer when it was warm. In wintertime, they'd go into the scrub land to get other animals and live off them.

When the tide was out, they would gather shellfish, spear all sorts of fish, get crayfish and abalone. You can still see the shells here, millions of them.

They knew what to do, the old people. They lived with nature all the time. They knew when the seasons was coming, and where to get the different sorts of food for the different seasons. They knew all about those things. That's how they survived, they knew nature."

Uncle Banjo

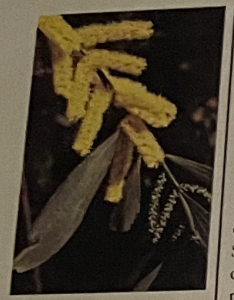
Like people living along the river systems, Aboriginal groups whose territory included part of the coastline had access to a rich and varied diet. Shellfish were easily collected from sandy beaches, mud flats and tidal pools. Fish could be speared from rock ledges and muttonbirds, penguins and other seabirds were available in huge numbers. On rare occasions, beached whales added something different to the coastal diet. In western Victoria, the coast from Cape Bridgewater to the South Australian border was also a source of flint for stone tools.

Just in from the seashore, behind the dunes, sheltered swamps and lagoons teemed with birdlife, fish, and crayfish as well as the water plants which were staple foods.

Port Phillip Bay itself and the marshy adjacent land was one of the richest, most reliable food gathering environments in the state. Seaside suburbs like Albert Park, now covered in asphalt, were once swamps in which Aboriginal people fished and gathered plant food.

People did not live on the coast all year round. Typically, they moved between the seashore and the plains so that their diet was not the same from month to month. They came to the coast especially in late summer when many coastal plants - Coast Beardheath, Pigface, Coast Ballart and Muntries - ripen their fruits. In high summer, people from many tribes and clans would set up camp by the shore to feast on the fruit and seafood. The middens of shells left behind, built up over thousands of years, may still be seen all along the Victorian coast, including Melbourne's bayside beaches.

Explorer George Grey described Aboriginal life along the Victorian and South Australian coasts in idyllic terms. He observed Aboriginal men .. *"at one time leaping from rock to rock, spearing fish that lie in the quiet pools, - in the next moment dashing into the boisterous surf, to spear a large fish, to battle with a seal, or to turn to a turtle... followed by a wife and children, as dear to them as ours are to us, who are witnesses of their agility and prowess, and who, when*



The green seed pods of Coast Wattle look like curled beans. They were cooked and eaten by Tasmanians. Shown here, the elongated leaves and blossom spikes.

the game is killed, will help to light the fire in which it is to be cooked, and drag it to the resting place, where the father romps with the little ones until the meal is prepared".

COASTAL PLANTS

COAST WATTLE Acacia sophorae
NAL-A-WORT? *Bunganditj*

The coast wattle was probably a Koorie food plant, being quite an important seasonal food in both Tasmania and South Australia. It grows only along the coast, in sand dunes and scrub behind the beach. Aboriginal people picked the seed pods when they were almost ripe and cooked them by laying them over a fire. The protein rich seeds were picked out and eaten. Other varieties of wattle seeds are ground up for food in Central and Western Australia.

The sweet pale fruits of the Coastal Ballart ripen all at once, producing a larger crop than the other Ballarts or Native Cherries. The fruit has a characteristic sweet, slightly astringent taste.

COASTAL BALLART Exocarpos syrticola

Unlike the Cherry Ballart, which bears only sparse crops of fruit, the Coast Ballart is a low shrub on which a much heavier crop of fruit ripens all at once. Aborigines would visit places where it grew, knowing just when to harvest the ripe berries, abundant enough in season to provide a feast.

Coastal Pigface, one of many succulents which were eaten. The fruit is both sweet and salty, the level of saltiness being related to the amount of salt in the soil.

PIGFACE (coastal) Carpobrotus rossii
CUTWORT Gippsland
PUUYUUPKIL *Gunditjmara*

This is the Coastal Pigface which bears sweet red fruit in late summer. It grows on sand dunes and cliffs. The fruit is broken off at its base and the pulp and seeds can be sucked out.

Captain Cook first saw this plant in New Zealand and named it accordingly. While early colonists preferred it cooked, Aborigines would have eaten it raw as a salad.

NEW ZEALAND SPINACH Tetragonia tetragonioides
BOWER SPINACH Tetragonia implexicoma

This green soft-leaved herb, sometimes called Warrigal Cabbage was probably eaten as a raw salad by Koories. Certainly the Europeans found it tasty when cooked as a vegetable. They liked it so much that it became one of the few Australian plants taken back for cultivation in Europe and America.

New Zealand Spinach grows on the coast and in other places where the soil is salty. It is an annual plant.

Bower Spinach is a climbing plant, also found along the coast, which may have been used as a green vegetable by Aborigines. It has red berries which are sweet when ripe.

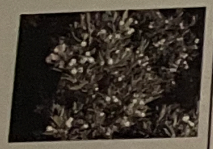
Muntries ripen in great abundance along south-western beaches in summer. These were photographed near Portland.

MUNTRIES Kunzea pomifera
MONTERRY
MUNTER
NGURP *Bunganditj*

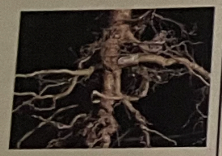
The fruit of this low spreading plant ripens in thick clusters along its long branches. Muntries (the Aboriginal name has been adopted) are crisp medium sized berries which taste a little like apples and have a red downy skin, like a peach. People from many different tribes and clans used to come to the coast in late summer when the muntries ripened to feast on the fruit. They were said to take the fruit-laden branches back to their camps with them to pick and eat the berries at their leisure.

Muntries grow in sand dunes, particularly along the western Victorian coast and in South Australia where they were beaten into cakes, dried and stored.

Muntries, Coast Beard-heath and Coast Ballarts, a summer harvest from the Portland region.



White crisp berries of Coast Beard-heath grow in profuston on this hardy shrub which is found on cliffs and sand dunes



Austral Hollyhock root, another starchy food plant available on the coast.

COAST BEARD-HEATH Leucopogon parviflorus
NGOOR-LE? *Bunganditj*

A coastal shrub which bears very small white berries, each with a hard stone. The sweet tasting berries ripen in summer. The tiny white flowers are furry inside - hence the name "beard-heath".

AUSTRAL HOLLYHOCK Lavatera plebeia
GNURITCH *Tjapwurong*

This plant which grows along the coast as well as in drier regions in western Victoria, had many uses. It produces a large starchy taproot which was eaten, probably cooked since it is tough. The outside of the stem is made up of fine fibres which Aborigines obtained by baking, then beating or chewing the stems. They twisted the fibres into string by rolling them on their thighs. The sap of the Hollyhock was also used to treat boils.

COAST BANKSIA Banksia integrifolia

A large tree, confined to the coast. Some may still be seen around the east side of Port Phillip. Like the cones of other banksias, Coast Banksia cones were soaked in water to extract the nectar and made into a sweet drink, often mixed with wattle gum.

The golden bottle-brush of Coast Banksia - Banksia integrifolia.

One of the coastal saltbushes, hardy plants with edible but not very nice tasting berries.

SEA-BERRY SALTBUSH Rhagodia candolleana

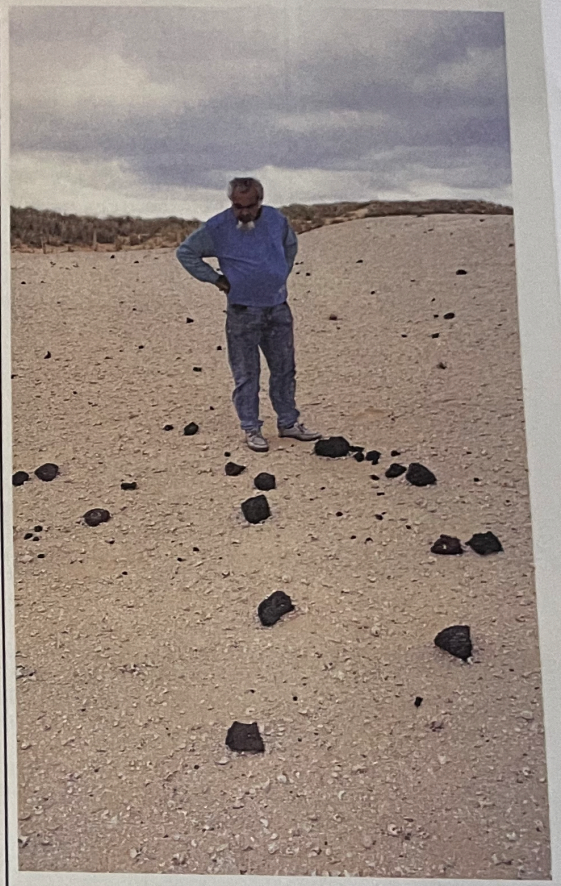
Coastal Saltbushes have saline leaves and small berry-like fruit which are juicy but taste quite bitter. There are records of Rhagodia berries being eaten by Aboriginal people.

"Down the beach, the old people used to take us down there. My Dad used to dive down off the rocks and look for crayfish, where the sea water comes in. He used to dive underneath, spear the big fish. White people used to come along the back and watch him. Abalone and big fish all along the beach.

We used to go out in the morning, in an old horse and cart, big day out, all the little children in the back of the cart. We'd go down to the beach, have a picnic somewhere and spear fish and gather mussels.

A lot of berries along the coast too. There was always something to eat, country supplies. Hunting all the time. When we was kids, we never went to the mission school, we'd be going all day. All along the river, some had rabbits, some would catch fish. We had everything from the bush."

Uncle Banjo



One of the largest middens in south-eastern Australia can be found on the coast between Portland and Warrnambool. Uncle Banjo Clark stands on part of this midden where old firestones lie on the mountain of shellfish, abalone and crayfish remains, evidence of hundreds of thousands of Aboriginal meals.

The soft greens and greys of typical Mallee vegetation. Many plants like the Eucalypts, Acacias and Porcupine Grass, (often called Spinifex), have adapted to the dry semi-arid Mallee conditions.

The Dry Country

The Koorie name "Malle" describes very dry country in which the trees have a characteristic way of growing. Below the ground is a massive "mallee root" from which several slender trunks arise. Many long roots run out horizontally at a quite shallow depth below the surface, while others drop down towards the deeper water table. By means of the shallow roots, the trees are able to collect and store water from small showers of rain.

The Mallee is the driest and hottest part of Victoria.Temperatures vary from over 30 degrees centigrade in summer to averages of 5 degrees in winter with occasional severe frosts. Lakes, waterholes and streams often dry out over the hot summer months, so Koories lived mostly along the Murray and around other reliable water sources. They made trips deep into the dry country for particular resources such as ochre and lerp, or at times when the season was mild and more favourable. On such excursions they relied heavily on the water stored in the mallee eucalypts. Aborigines were, says one of Brough Smyth's corresponents in 1872, "never at a loss" for good clean water in the Mallee, a skill which "would have saved the lives of very many white men, whose bleached skeletons, lying on the arid plains, alone testify to their once having existed".

Brough Smyth, writing in 1878 about the traditional Aboriginal life he believed would soon disappear with the Aborigines themselves, relied on the information of many different European observers. One such informant, on a trip into the Mallee with a native stockman told how the man found water by: "tracing the roots (of a suitable tree) by a slight crack discernible on the surface of the ground." After digging under the root and exposing "perhaps fifteen or twenty feet", he broke it up into shorter sections from which he stripped a portion of the bark. These pieces he leant against a tree, "leaving their liquid contents to drop into a pannikin." This same observer estimated that a root twenty to thirty feet long yielded between a pint to a quart of clear water.

"There were normal things we were taught - where things were and how to collect them. Manna was one, and the mistletoe fruits that we loved to eat. We had the buckaburns and the sour-grass and all the things that you get vitamins from. That was how the Aboriginal people had a lot of health - they didn't have sicknesses. They got all the natural foods, they picked them in the wild.

Aboriginal people living in towns and cities get all processed food and they have all sorts of sickness such as diabetes and high blood pressure. We didn't suffer from those sorts of things."

Auntie Liz

The purple flower of the Small Vanilla-lily which often grows in abundant patches in drier regions.

Vanilla Lily roots were listed by Ferdinand Von Meuller, the designer of the Botanic Gardens, as an Aboriginal food. Each plant yields many crisp tubers.

The spectacular blooms of Pigface once covered vast areas of Victoria's northern plains. Both coastal and inland types were important Aboriginal foods.

Like many lilies, the Mallee Fringe-lily, (Thysanotus baueri) flowers in spring. The tuberous roots were eaten in South Australia and probably Victoria.

MALLEE PLANTS

SMALL VANILLA LILY Anthropodium minus

Found in drier areas than the Pale Vanilla Lily, the multiple white tubers of this perrennial herb were probably eaten. The plant is often locally abundant, and the tubers which are borne on short underground stalks are available all year. They are quite palateable without cooking.

SMALL LEAVED GLEMATIS Clematis microphylla
TAROOK *Gunditjmara, Tjapwurong*

A climbing vine found all over Victoria, but particularly common in the Mallee, scrambling over other plants. The roots are numerous, hard and starchy, but in the Mallee, quite thin. When eaten raw, the young roots are peppery. Dawson describes the preparation of Clematis roots by Aborigines in the western district as "cooked in baskets and kneaded on a small sheet of bark into dough". There are other clematis species which were probably also eaten, such as Clematis glycinoides, found in Gippsland forests. This plant is used as medicine in Queensland, being known as "headache vine".

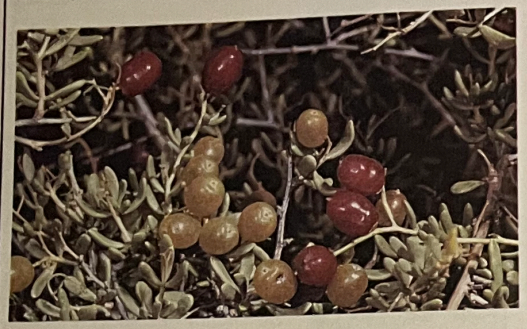
INLAND PIGFACE Carpobrotus modestus
PIGFACE Sarcozona praecox

Both these kinds of Pigface are common in the Mallee. The leaves of this plant were eaten, as Edward J. Eyre reported "as a sort of relish with almost every kind of food", possibly because of their somewhat salty taste. The fleshy leaves and glutinous fruit are a good source of moisture as well.

KANGAROO APPLE Solanum simile

A smaller Kangaroo Apple of drier areas. The flowers are purple, the ripe fruit is spherical, about one centimetre across, a creamy colour, sometimes with a purplish tinge. This plant is widespread across Australia. Care must be taken not to eat the fruit until it is absolutely ripe and falls to the ground as it is poisonous when unripe. The 19th. century botanist Joseph Maiden wrote:
"Both black and white men agree that to eat too many will cause sickness". The fruit, he said "causes a hot burning taste in the mouth, but its scent reminds me of that of strawberries".

DILLON-BUSH, NITRE-BUSH Nitraria billardieri
DILANJ *Wemba Wemba*



On some Dillon Bushes yellow and red berries ripen together. Their sweet-salty taste and abundance made them a favourite Aboriginal food.

Dillon-bush fruits were an important and popular food for Aborigines in the Mallee and around the middle and lower Murray. When ripe, the fruit is red or greenish-yellow, and each bush bears a heavy crop in late summer. Although somewhat salty, the juicy grape-like berries are good to eat. Dillon Bush thrives on disturbed soil. Peter Beveridge, an early settler at Swan Hill noted that many new plants grew around Aboriginal camps where the stones from fruit had been discarded. Today it behaves like a native weed on land which has been overcleared or degraded.

Sweet Apple-berry blossoms, photographed at the Monash University garden.

SWEET APPLE-BERRY Billardiera cymosa

A climber with narrow leaves and mauve flowers. The fruits are soft and greenish-red when ripe. Apple-berries are often cultivated in suburban gardens.

Sweet Appleberries grow in both Victoria and South Australia. The fruits, which are soft when ripe, have a faint aniseed flavour.

EUMONG (not a Victorian name) Acacia stenophylla

Eumong - Acacia stenophylla. These blossoms were photographed near Swan Hill.

A small tree with weeping branches and very long leaves (phyllodes). The flowers are pale yellow balls, and the pods are long, hard and lumpy like a string of beads. The

Edible seeds of Eumong, collected near Hattah Lakes in north-western Victoria

Ruby Saltbush with its bright red fruits, growing in the Nyah Forest..

seed-pods were laid on the fire while still green and soft, and the seeds were then picked out and eaten. Eumong is found on the flood plains of the Murray-Darling river system.

RUBY SALT-BUSH Enchylaena tomentosa
GURGUDJ *Wemba Wemba*

A small ground-hugging shrub, the stems covered with woolly hairs. The small leaves are succulent and cylindrical. The red button-shaped salt-bush berries can be easily shaken off the plant. Each one contains a black seed.

NATIVE PEAR, BUSH BANANA, AUSTRAL DOUBAH
Leichardtia australis
GNONITCH GNONITCH Lake Boga

A slender twining plant with long thin leaves in pairs. The flowers are creamy and bell-shaped and grow in dense clusters. The fruit is a large green pod, which when ripe contains black seeds and many long silky hairs. The unripe fruit and the tuberous roots were eaten raw or cooked. The plant is widespread but not now common.

NARDOO Marsilea drummondii
DULLUM-DULLUM Lake Boga

This is a small fern with leaves like four-leaved clover which grows in water, particularly on flood plains such as those of the Murray which are inundated for only part of the year. When the water dries, the plant's small brown spore-cases can be collected. The women roasted these, ground them up, and separated the hard, dark spore cases from the whitish spores. The spores swell up in water, and were made into a cake and cooked. At Lake Boga, the spore cases were called JERINYUK. The word NARDOO comes from Central Australia and western NSW.

Small brown spore cases and clover-like leaves of Nardoo. The plant thrives on land that is regularly flooded. Aboriginal women pounded the spore cases and made a kind of damper from Nardoo.

Brough Smyth writing in the 1870s, gives an account of how the seed husks were separated from the seeds after roasting, by being put into "a shallow wooden vessel, made by hollowing out the elbow of a tree, and the ashes are blown away by the breath; they are then pounded on a stone, and again placed in the wooden vessel, shaken, and the husks blown away, until only the flour remains, which is mixed with water, and made into rolls about 18 inches in length. These rolls are baked and eaten."

Burke and Wills who were "reduced to starvation on nardoo" may possibly not have known how to prepare the seeds so as to render them digestible. Wills' pitiful diary entry, some days before he died says " I cannot understand this nardoo at all; it will certainly not agree with me in any form. We are now reduced to it alone, and we manage to get from four to five pounds per day between us. It seems to give us no nutriment."

SUGARWOOD Myoporum platycarpum
GNURREL Lake Boga
NGURAL Lake Hindmarsh
MANDI *Madi Madi*
CUTLEWARAN (sugary sap from the tree) Lake Boga

A small crooked tree with rough dark uneven bark and drooping branches. The leaves are smooth and dark green, while the small flowers are white. The sugary sap of the tree was eaten, the wood was used for womeras and shields, and was lit as a torch in canoes for night fishing because it burns with a clear bright flame. The resin was used as cement, for example to fasten stone flake points to spears.

Named for the sweet edible sap it produces, a Sugarwood tree flowers in the Mallee

Santalum acuminatum, Desert Peach or Quandong, a fruit much enjoyed by Aborigines and early settlers

Fruit, stone and leaves of Bitter Quandong collected in the vicinity of Ouyen.

QUANDONG, NATIVE PEACH Santalum acuminatum
(Quandong is not a Victorian name)
BIDJIGAL Wergaia, Lake Hindmarsh
GUDI GUDI *Madi Madi*
GOURRKGOURRKCOOK
WARRAWILL
BEETICUL red Quandong, Lake Boga.

The beautiful shiny red fruit of the quandong or desert peach ripens in spring. This small tree with its dull green leaves, growing in semi-arid environments produces a surprisingly heavy crop. Edward J. Eyre was much taken with the Quandong tree, claiming that: "When in full bearing, nothing can exceed its beauty, drooping beneath its crimson load." Like many early settlers, he found the fruit excellent for making preserves.

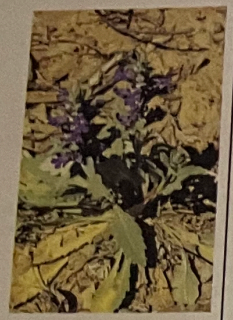
Quandongs have a deliciously tart flavour and are rich in vitamin C. The seed kernel has a high oil content and is also a good source of protein. Aboriginal people ate both the fruit and the seed which sits inside a hard pitted stone and has a very strong flavour, similar to oil of wintergreen. The seeds were often ground up into a cream and applied as medicine for the scalp. Quandong trees were thought to have other powers. The Madi Madi said that if you carved a hole in the Quandong tree and placed something belonging to a person in it, that person would slowly waste away.

The wood of the tree was used sometimes for firemaking by the saw method. Today the knobbly round stones of the Quandong are used by Koorie craftspeople in making contemporary jewellery.

The CSIRO Division of Horticulture in Adelaide has been working on the cultivation of Quandongs, and it is possible to get seedlings and instructions for planting from Adelaide nurseries.

BITTER QUANDONG Santalum murrayanum
MING Lake Boga
MINGUN *Madi Madi*

A small tree or shrub with drooping branches, and dull-green leaves. The leaves are generally narrower than those of the Sweet Quandong. The fruit is brown to yellowish-red and very bitter to the taste. Some people were able to eat it nevertheless, and were much admired for this talent. Roasting was reported to remove the bitter taste. A stupefying drink, called COOTHA was made from the root and bark at Lake Boga.



Austral Bugle - Ajuga australis, growing in dry soil at Pink Lakes

AUSTRAL BUGLE Ajuga australis

A soft herb with a spike of large purple-blue flowers, particularly well developed in the Mallee. The soft paired leaves were placed in hot water and used to bathe sores and boils.

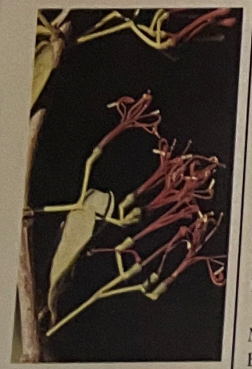
MALLEE MISTLETOE Amyema miraculosum

A parasitic plant found especially on Quandongs, Sugarwood and She-oaks. The leaves are in pairs, the flowers dark red. The fleshy fruits were eaten, but can stick unpleasantly to the teeth, as they do to the beaks of the Mistletoe Birds, which spread them from tree to tree.

CYPRESS PINE, MURRAY PINE Callitris collumellaris, Callitris preissii, Callitris verrucosa
MARONG Wimmera
MARRUNG Lake Boga
GENUMARRUNG (pine resin) Lake Boga

Cypress-like trees with cones which open out in several parts. The wood was used for fashioning tools such as canoe poles and womeras and also for firemaking. A clear resin drips from the branches - it was used as a cement to fasten the kangaroo-tail sinews which bound the head onto reed spears, and for cementing axe heads onto wooden handles.

Early settlers cut down these trees for their houses - the Beveridge's homestead Tyntynder is lined with Murray Pine.



This mistletoe, Amyema miraculosum, grows only in the Mallee. Its sticky fruits were an Aboriginal food. Shown here, the red pendulous flowers.

MALLEE EUCALYPTS Eucalyptus species
BUNURDUK Dumosa Mallee
DANYO, GUNAMALANG, TYALLA Mallees (All Lake Hindmarsh)
BORRUNG, BOURWITCH, MALLE, small Mallees
WEEAH root for water from a Mallee (All Lake Boga)
WIARGADJIN Water tree, esp. Eucalyptus incrassata
Wergaia

Aborigines used several different Mallee Eucalypts in similar ways. They pounded the bark of the roots up for food and drained sections of the horizontal roots for water. Boomerangs were cut from the wood, and lerp, a sweet white case produced by a tiny sap-sucking insect, was gathered from the leaves. Aborigines would fire part of the Mallee each year to produce new shoots on which the insects thrived.

Beautiful striated trunk and Cypress-like leaves of the Native Pine growing in a small plantation near Barmah.

Seen in the Mallee, the sugary deposits of Lerp, looking something like fairy-floss. The tree is Eucalyptus behriana, the Bull Mallee.

Edward M. Curr, writing of his observations of Aboriginal people in north-western Victoria in the 1840s noted:

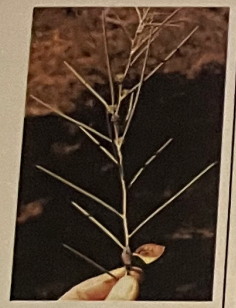
"One of the articles of food which we found most in use amongst the Blacks of Lake Boga neighbourhood and the mallee scrubs was manna. There were bags full of it in almost every camp, and I understood the Blacks to say that they used to set fire to a portion of the mallee every year and gather the manna the next season from the new growth."

Beveridge called it "tarp" saying that in the dry summer weather, the deposits were so large that "an Aboriginal can easily gather forty or fifty pounds weight of it in one day", from which they "make a sweet and luscious beverage by mixing it with water."

Clumps of Porcupine Grass interspersed with Mallee eucalypts. The tough grass produces a resin used in the production of Aboriginal implements and weapons.

PORCUPINE GRASS Triodia irritans
WALLOO Lake Boga

A very sharp spiky grass which grows in the Mallee. Resin can be obtained by beating out the clumps or firing the grass and collecting the sticky globules. The resin was softened over a fire, and could be used to cement stone flakes to spears or womeras, or to fix the binding of a stone axe. Porcupine grass resin was used in areas where the more easily collected Grass-tree resin was not available.



The roots of Silver Needlewood were another source of water for Aboriginal people travelling through dry country.

SILVER NEEDLEWOOD Hakea leucoptera
DJIN Lake Hindmarsh

A small tree or shrub with sharp-pointed stiff cylindrical leaves, white flowers and a woody fruit. The roots were dug up and drained for their water in the same way as were the roots of various Mallee eucalypts.

"Honey - the menfolk used to track the bees and find the honey hives, the wild honey. We used to go out with them and sit there and keep the smoke going over them so they didn't get stung They didn't have any other precautions, just the smoke from the fires that we kept going around the trees.

We took the honeycomb back home and that was beautiful. We loved the honeycomb as children. We ate the lot. The sweet things, the manna and the honeycomb were special things for children."

Auntie Liz

Don Chatfield and Rueben Berg extracted this honey from a beehive built by wild bees behind the weatherboards of an outhouse. These are introduced bees; the native bees are stingless.

Brilliant greenery in a lush Victorian mountain forest. The forest provided a range of resources for Aboriginal people.

MOUNTAIN FORESTS

In eastern Victoria, the Otways and some sheltered parts of the Grampians, forests of Eucalypts and ferns grow on the mountain slopes. These mountain forests are moist, dark and cool. The tops of the majestic gums, some over two hundred feet tall, sway overhead, forming a canopy through which only a little dappled sunlight can penetrate to the forest floor. Rainfall is generally high, and even during the hot summer months, the forests retain moisture in the soil and filter the burning rays of the sun.

In this environment, not many plants produce the tubers which were so important on the plains and open forests. Here the main Aboriginal plant food resources were the roots of Bracken Fern and the soft pith inside the growing stem of the Tree Fern.

Mountain forest plants supplied other essentials. A much prized plant, the fire-drill or Austral Mulberry grows down in the fern gullies, the wettest and most sheltered parts of the forest. The Aborigines called this plant DJELWUCK. So valuable was it that it was traded for other important commodities as far up the Murray River as Lake Boga.

The Bootlace Bush and the Poison Pimelea provided fine silky fibre for net-making, in particular, for the nets which were used to catch the Bogong moths. It is possible that people set up camps in the mountain forests, (the moths were caught by small parties of men who climbed up to the higher slopes), in order to be close to the natural habitat of the Pimelea. An account from the 1830s describes in detail how the Pimelea fibres were extracted to make the nets:

" A shrub, (Pimelia sp.) growing abundantly in places by the river sides to a height of three to four feet, furnished the fibre. The bark of this bush was stripped and allowed to dry, was then placed in water, and weighted down with stones for several days till the non-fibrous portions were partly rotted. It was then taken out of the water and spread in the sun to dry till it was quite crisp, after which the fibre was freed by beating with sticks or flat stones. All this was women's work, and they managed to produce a tenacious material from it that could be spun into the finest threads."

"When I was young in the bush, we lived in a bark hut but we were all healthy kids. I never went to the mission school. School was the bush where I roamed and hunted. Food was all bush tucker - whatever you got like porcupine, turtle, seeds from the trees, watercress along the river. We had plenty of food as far as bush food was concerned.

Some families never had enough, but they all shared. Everyone helped one another. If someone had a better feed than someone else in the bush, they'd share with the rest."

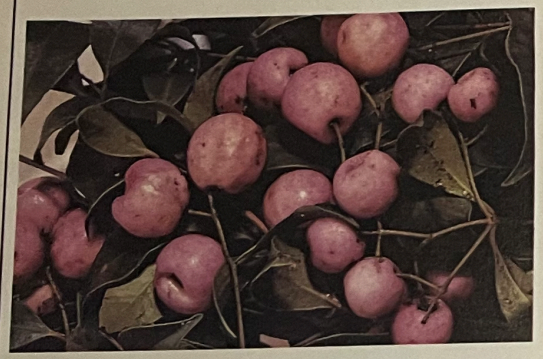
Uncle Banjo

The annual summer moth hunts brought many hundreds of Aboriginal people from a wide area of the Upper Murray, Ovens River and Monaro into the mountains for feasting, dancing, ritual and trade.

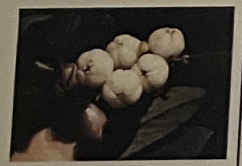
FOREST PLANTS

LILLY-PILLY Acmena smithii

There are several varieties of Lilly-pilly used as ornamental trees in Melbourne's streets and gardens. The native plant grows best in the moist soil of mountain gullies, and before being planted extensively, was found only in Gippsland and Wilson's Promontory. The pale mauve or white berry-like fruits are pleasantly tart and juicy. Lilly-pilly fruits were used by early settlers to make jam. Aboriginal people would have eaten them raw, as a refreshing snack food.



Pink Lilly-pilly berries growing in the centre of Melbourne, pitted by the city's smog.



These ripe Wax-berries were found in summer, growing at Errinundra.

WAX-BERRY Gaultheria appressa

Wax berries grow in clusters of white five lobed fruits which ripen in late summer. They have a sweet taste and crisp texture. The wax-berry shrub only grows in the higher mountain country. The flowers preceding the fruit are white and bell shaped.

The Prickly Currant Bush, a widespread mountain plant., photographed at Mount Buffalo.

PRICKLY CURRANT BUSH Coprosma quadrifida
MORR Coranderrk

The small sweet currant-like fruits of the Prickly Currant Bush ripen from January through to March. This plant is found in tall forests over much of Victoria, often growing near streams. It has tiny thin leaves in pairs growing on spiky branches.

ROUGH COPROSMA, Coprosma hirtella

The fruits of this dark green bushy shrub are red and have small stones. They ripen in January to March. Rough Coprosma is more common in the higher forests of the alps. The name springs from the fact that the broad leaves have a sandpapery feel.

Berries of Coprosma hirtella or Rough Coprosma found growing in a Gippsland forest.

Persoonia juniperina. The fruits of this and other species of Persoonia were important Aboriginal foods. They have hard stones which are dispersed by emus and possums.

GEEBUNG Persoonia species
Geebung is a NSW name.

These shrubs have narrow yellow flowers and bear green or dark-coloured fruit with a very hard stone. Some, like Persoonia juniperina, have narrow leaves and are prickly. The Prickly Geebung is found all over Victoria, but there are five other Geebungs which grow only in Gippsland.

Fruit of Solanum vescum, Gippsland Kangaroo Apple or Gunyang. The Koories sometimes put the fruit into sandheaps to ripen them more quickly.

KANGAROO APPLE Solanum vescum
GUNYANG (Lake Tyers)
KOONYANG,
GOONYANG

A large shrub which has soft irregular leaves, often shaped like a kangaroo's paws. The flowers are delicate and pale mauve and the large round fruit is yellow-green when ripe and contains many seeds. The Reverend Bulmer, Administrator of Lake Tyers in the 1860s noted that "In Gippsland the Kangaroo apple was a source of much enjoyment when they were plentiful but were only enjoyed .. at long intervals as they did not grow every season." This plant is usually found in sandy soil, and is what is called a fireweed - that is, it springs up in large numbers after a fire, and then disappears after a year or two. Regular Aboriginal burning would have ensured a continued supply.

HYACINTH ORCHID Dipodium punctatum

This orchid has no leaves and is only seen when it sends up large spikes of spotted pink flowers in late summer. Under the ground it has dark soft branching roots which were eaten. Koorie women would have known where to dig for these even when the plant was not flowering. It favours rich soil in damp forests. This is a protected plant.

A Hyacinth orchid blooms on the forest floor. It produces large long tubers, once an important Aboriginal food.

Kurrajong seeds in their tough woody pods are highly nutritious.

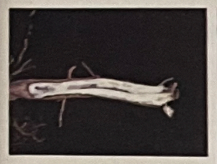
KURRAJONG Brachychiton populneus
KURRAJONG *Dharuk* (Sydney)

The bark of this large tapering tree was a source of fibre, used for making string for nets, head bands and fishing lines. It has bell-shaped flowers and woody, purse-shaped fruit which contains yellow seeds surrounded by stiff hairs. The young roots of the tree were eaten, and probably the seeds, after removing the irritating hairs. Kurrajongs are found only in east Gippsland, but are common in NSW and often planted as street trees in Victoria.

SOFT TREE-FERN, Dicksonia antarctica
ROUGH TREE-FERN, Cyathea australis
KOMBADIK Coranderrk
KUM-BA-DA Melbourne
KUROK MUKKIIN 'grandmother of ferns' (used as a general term about Tree-ferns) *Gunditjmara*
WONON TULONG *Tjapwurong* (Not clear whether these names apply to Soft or Rough Tree-ferns)

The still curled new fronds of the Smooth Tree Fern. The soft pith of the stem was scooped out as a forest food.

Tree-ferns grow in gullies and damp forests throughout Australia. Dicksonia antarctica or Soft Tree-fern is the type most often used as an ornamental fern in Melbourne gardens. In Victoria, Aboriginal people ate the starchy pith from the top part of the stem. To get at the pith, they split the stem and scooped out the pith, an operation which does not kill the fern. Both Rough and Soft Tree-ferns were used as Aboriginal foods.



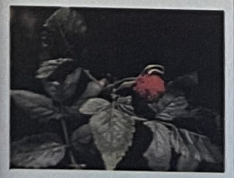
Bracken root, showing the starchy white pith.

BRACKEN, Pteridium esculentum
MAKKITCH also MURKINE (root) *Gunditjmara*
MUKINE, MAWKUM Lake Condah
MUULAA *Tjapwurong*
GEEWAN Gippsland

Bracken fern is a hardy fire resistant plant, widely distributed throughout higher rainfall regions. The green part was not eaten but the underground stems which are fibrous and starchy were gathered as a staple food. Bracken roots had to be prepared before they could be eaten. Dawson describes "a kind of bread" made by the Aborigines of the western district "of the root of the common fern, roasted in hot ashes, and beaten into paste with a stone."

Bracken infests pastures which once bore forests and has gained the false reputation of being an introduced weed. It appears after a forest is burned or where a tree fall allows light to come in and is then gradually shaded out as the forest grows thick again. The best Bracken roots, far superior to those of the scrubby Bracken which grows on cleared land, can be found in places like the Framlingham Forest.

Uncle Banjo stands amidst shoulder high Bracken Fern in the Framlingham forest.



Native Raspberry, (Rubus rosifolius), collected from Gippsland.

BRAMBLE, NATIVE RASPBERRY Rubus rosifolius, Rubus hillii.

Two native raspberries, found only in the eastern part of Gippsland.

These forest raspberries are found mostly in high rainfall areas. They are a delicious seasonal snack food, unfortunately being rapidly replaced by the aggressive European blackberry. Eradication programs which use chemical sprays against the pestilent imported blackberry, have also helped to kill the native raspberry.

Silver Wattle gum. Although Acacias produce highly nutritious seeds, Victorian Aborigines only used wattle trees for wood and gum. The Tasmanians also ate the seeds of Coast Wattle.

"You like to remember your parents and some of the things they did and how they liked telling us how they coped. We used to just catch a fish and make a fire and cook the fish and make a damper under the ashes. We really loved it as kids. It was like nothing else to us, making a damper and cooking it under the ashes."

Auntie Liz

Bell-shaped Potato Orchid flowers grow from a segmented underground rhizome rich in starch.

WHITE ELDERBERRY Sambucus gaudichaudiana
BURNE-BURNE Lake Condah

The edible berries of this soft-leaved bush are small and translucent. They would have been enjoyed raw as a snack while other foods were being gathered. The plants are found where rainfall is high, more often in places sheltered from the wind.

SILVER WATTLE Acacia dealbata

Silver Wattle wood was one of the timbers used by Victorian Aborigines to make stone axe handles. The tree has frond-like leaves and bright yellow wattle blooms which appear in early spring. Like the similar Black Wattle, its gum was eaten or dissolved in water with flower nectar to make a mild sweet drink. The sticky gum could be mixed with ash to make a water-proof paste, used for filling in holes in bark water vessels.

MANNA GUM Eucalyptus viminalis
BINNAP Yarra
YULONG ? *Tjapwurong*

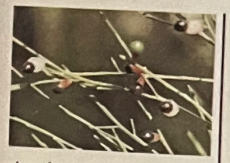
The Manna Gum tree was named for the sugary white extrusions of sap which form on its twigs, eventually falling to the ground where it was collected by Aborigines, like the manna described in the bible. The sap comes through tiny holes bored by an insect. Early settlers in Australia's south east also enjoyed manna. It has to be gathered quickly after it falls, or ants carry it away.

Manna Gums have long thin leaves and pale trunks from which the bark comes off in long ribbons. They can be found throughout Victoria, although not in very dry regions.

Aboriginal people used the wood for shields and the hollowed out burls on the trunk as water vessels (Tarnuks). The leaves were thought to have medicinal properties and were smoked over fires to lessen fever.

POTATO ORCHID, CINNAMON BELLS, Gastrodia sesamoides
PUEWAN? *Tjapwurong, Gunditjmara*

The roots of the potato orchid are very nourishing, being rich in starch. They were prized by both Victorian and Tasmanian Aborigines but when the plant withers, the roots can be hard to find. James Dawson, an early western district settler gives an accounts of local Aboriginal people gathering Potato Orchid tubers by digging where bandicoots had scratched for them.



Another of the cherry ballarts, Exocarpus strictus or Pale Ballart, grows in mountain forests.

Sub-alpine Beard Heath, a high country shrub produces a multitude of edible red berries.

The Potato Orchid has no leaves, but sends up a flowering stalk in summer with bell-shaped pale brown and white flowers. It is mostly found in wet regions and rich soils.

PALE-FRUIT BALLART Exocarpus strictus

This native cherry is quite widespread, growing in forests in New South Wales and Tasmania as well as Victoria. It has whitish fruits, smaller than the Coast Ballart, which it closely resembles.

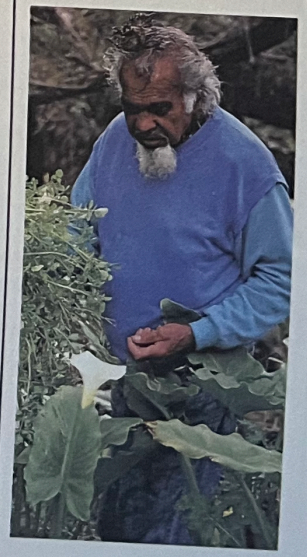
SUB-ALPINE BEARD HEATH Leucopogon macraei

Beard Heaths grow in the alpine areas at high altitudes. The small red berries of Leucopogon Macraei are edible and look very similar to those of Leucopogon montanus, the Snow Beard-heath.

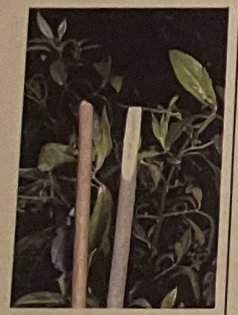
WATERCRESS Rorippa species.

Australia has more than a hundred members of the cress family. Along with the native cresses, many European watercressses now grow here, some thriving in suburban drains.

Watercress is a favourite Aboriginal salad plant. It is found along creeks and the edges of waterholes in coastal forests. In Victoria the best known native cresses are River Cress, Rorippa eustylis and Marsh Cress, Rorippa laciniata. Introduced species are common, and are also used as salad.



Uncle Banjo with a fresh bunch of Watercress picked from the Framlingham Forest spring.



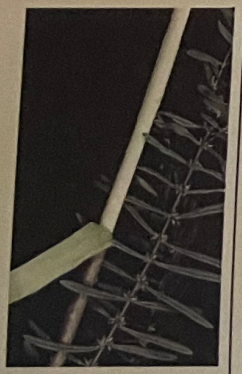
Hedycarya augustifolia or Austral Mulberry grows in mountain areas in Victoria and New South Wales. Straight smooth stems like these were ideal for making fire by the friction method and were highly valued by Aborigines.

AUSTRAL MULBERRY Hedycarya angustifolia
DJELWUCK *Wurundjeri*

A mountain shrub which thrives in damp gullies, this plant produces straight upright shoots from its base which make ideal fire-drills. These sticks or DJELWUCK were used to make fire by twirling them in a hole in a flat piece of wood, often the dry flower stalk of the Grass-tree, to create friction. Tiny smouldering fragments of pith were then blown into a flame. The best fire sticks were very straight, dry sections of the plant, about 60 cm long and 1 cm in diameter

BOOTLACE BUSH Pimelia axiflora

The nineteenth century botanist Joseph Maiden said "The bark yielded from every portion of these plants furnishes an excellent fibre of great strength" and noted that the Aborigines made use of the fibre of other Pimelia species as well.



The outside of the stems of the Pimelia bush can be peeled back in long strips. Aborigines extracted the fine fibre for making nets

Tubers of the mountain Arthropodium or Vanilla-lily are as large as carrots.

This species of Vanilla-lily, as yet un-named, grows in the mountains. It produces large edible tubers.

This relatively undisturbed roadside plot is rich in tuber bearing plants. Growing together are Bulbine Lilies, Milkmaids and Chocolate Lilies. Remnant vegetation like this allows us to imagine Victoria's plains as they once were.

Plains and Open Forests

Victoria's great savannah grasslands, stretching in the west from Geelong to the Grampians and north to the Murray River, were fertile hunting and foraging grounds for the Aborigines. On these plains, the peoples of central and western Victoria caught wallabies, kangaroos, emus and bush turkeys. Fish and eels were plentiful in rivers and lakes, and under the grasslands, in the earth's natural larder, were stored the root crops which were depended on all year round as staple foods.

Many important Aboriginal plants were common to both the drier northern plains and the more temperate western plains. Over both regions winters are mild and not very cold, while summers are hot and dry. Small soft plants such as lilies, orchids and Murnong send up leaves during the autumn and winter and flower in spring and early summer. As the weather gets drier, their foliage dies down and their energy is absorbed into tuberous roots, to be stored safely away from the heat.

Regular Aboriginal burning of the plains ensured that fertilising ash was returned to the soil, feeding the small plants and grasses. Trees were thinned out and undergrowth controlled. Aboriginal cultivators maintained the plains in such pristine condition that early settlers described parts of western Victoria as looking "just like a gentleman's park."

Thomas Mitchell in his account of his party's journey across Victoria's western plains wrote:

"Every day we passed over land which, for natural fertility and beauty, could scarcely be surpassed; over streams of unfailing abundance, and plains covered with the richest pasturage. Stately trees and majestic mountains adorned the ever varying scenery of this region, the most southern of all Australia, and the best."

"There's an emu in the Milky Way and two bright stars, and as the stars get brighter during the month of May, the emu neck stretches, and that's when we know there's a lot of emu eggs around.

We used to catch emu right through here. The flood waters would bring the swans. Grandfather always carried a Boondi. He used to run, he was a big man, six foot four, and whack! straight over the head. We'd have goanna and snake. That's how I was taught to get goannas, snakes and emu."

Wally Cooper

Each Chocolate Lily plant produces a small bunch of tasty tubers.

LILIES

CHOCOLATE LILY Dichopogon strictus

The purple flowers of this native lily have a distinctively chocolate smell. It grows abundantly and has many root tubers branching out from each plant. The tubers which are white inside, were roasted before they were eaten.

Small purple flowers of the Chocolate Lily mark the presence of underground tubers.

SMALL VANILLA LILY Arthropodium minus

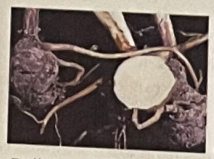
This small lily is found in drier areas than the other vanilla lily (Arthropodium milleflorum). The tubers are clustered close to the base of the plant, and it is common to find this lily in patches. It was gathered for its non-starchy crisp tubers.

"They used to take the children away from their parents because when they looked in the cupboards there was nothing there. They thought there was nothing to eat. But Aborigines didn't have to stock up their cupboards. They could go out anytime to get something to eat. That's where the Whites didn't understand. It was sad, very, very sad.

When I was a kid, if you wanted a feed, you'd just go down to the river and catch a fish, or go and dive for mussels. Our food was top food."

Uncle Colin

This Small Vanilla Lily (Anthropodium minus) was grown in the Monash University garden. The crisp tubers can be eaten raw.

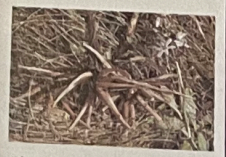


Bulbine Lily corms, one of the sweetest of lily roots.

BULBINE LILY, Bulbine bulbosa
PARM, PUEWAN *Gunditjmara, Tjapwurong*
PIKE Coranderrk

Under the stalk and soft long leaves of the bulbine lily is a plump round corm with many thick roots radiating from it. In spring a spike of yellow flowers appears. The corm, which can be eaten all year was probably cooked first.

Flowers and buds of Bulbine Lily, still to be seen in colourful patches among imported grasses on land which is not grazed or regularly planted with crops.

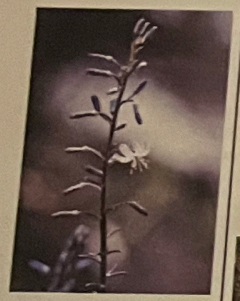


Slender Milkmaid tubers are crisp and starchy. Individual plants produce up to ten tubers.

MILKMAIDS Burchardia umbellata
POPOTO Lake Condah

Except in the Mallee, the pretty white flowers of this native lily can be seen all over Victoria in spring. Each plant has a number of long starchy roots which branch out from the base of the flowering stem. These roots, which can be harvested at any time of the year, would have been cooked before eating.

The clusterered flowers of Milkmaids, a root vegetable once harvested all over Victoria by Aboriginal women.

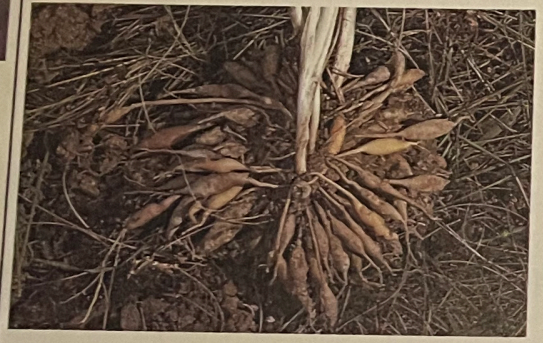


Blue Grass-lilies flower in spring but their tubers are available all year round. The colours vary from very pale blue to purple. This species is Caesia calliantha.

GRASS LILIES Caesia species

There are three species of Grass lilies which grow in Victoria. They all have purple or blue flowers which twist into spirals as they die down.

Grass lilies are perennial plants which produce a clump of finger-shaped tubers, sweet tasting but not starchy. They have a crisp texture and are quite good to eat fresh.



Surprisingly abundant, the long tubers of Blue Grass-lily have a sweet taste

The tiny flowers, translucent tubers and twining stem and of the Twining Fringe-lily, still to be found in native flower reserves.

FRINGE LILIES Thysanotus, 3 species.
TWINING FRINGE LILY Thysanotus patersonii
COMMON FRINGE LILY Thysanotus tuberosus
MALLEE FRINGE LILY Thysanotus baueri

The fringe lilies, so called because of their fringed flower petals, all have a cluster of white watery tubers at the base of the plant stem. These tubers would probably have been cooked before being eaten.

The Twining Fringe-lily is somewhat different to the other two, having a very long thin twining stem with scarcely any leaves. The Common Fringe-lily and the Mallee Fringe-lily have rosettes of narrow leaves.

Flowers of Early Nancy with their distinctive dark inner rings. The tubers are small, round and very starchy.

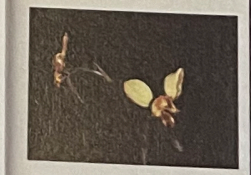
EARLY NANCY Wurmbea dioica

The Early Nancy is the first native lily to flower each spring. Its underground corm is protected by black overlapping scale-leaves. Inside, the corm is very starchy. Although it is quite small, it would have provided a substantial amount of nutritional energy.

BLUE STARS Chamaescilla corymbosa
MUDRURT Lake Condah

A native lily with clusters of small blue flowers, and several elongated tuberous roots growing from the base of the plant. Like other lily roots, these would have been part of the traditional Aboriginal diet. Blue Stars flower in spring and are often quite abundant in open forests on sandy soil, and in heathlands.

Six lobed flowers, more mauve than blue, of the lily called Blue Stars. These were found growing at Kangaroo Ground.



Diuris or Donkey Orchid, growing in the protection of a flower reserve at Kangaroo Ground. The two characteristic large petals look like oversized ears.

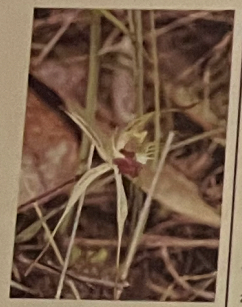
ORCHIDS
LEOPARD, TIGER, WALL-FLOWER, DONKEY ORCHIDS, GOLDEN MOTHS, Diuris species.
HINNAEHINNITCH,"Bat faced" *Tjapwurong*

Orchids were an important food resource for Aboriginal people in south eastern Australia. These plants which Europeans think of as exotic and which for some collectors are the subject of passionate interest were once everyday vegetables for Aboriginal people.

All orchids have edible tubers which vary in taste and in the amount of starch they contain. Most are quite small, but some grow in dense patches and can be harvested at any time of the year. Diuris species, of which there are six or seven in Victoria, can be recognised by their two longer petals, sticking up like ears. Their tubers are particularly starchy and would most certainly have been eaten by Aborigines. The Tjapwurong name which means "bat-faced" is a very apt description, the proportions of the flower bearing a startling similarity to a small bat's face with its oversized ears.

This Leopard Orchid, another of the Diuris species, has paired potato-like tubers.

The flowers of this species are generally but not always yellow to red-brown. A few have white or purple blooms.



Spiky petals of the Green-comb Spider Orchid, Caladenia dilatata. The special starch produced in orchid tubers was once also highly prized in Europe.

SPIDER ORCHIDS Caladenia species, Caladenia dilatata
KOOLIN Coranderrk

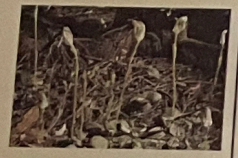
The tubers of this orchid are paired. The Aboriginal name meaning "man" no doubt refers quite aptly to the fact that the tubers look like testicles. Round paired tubers are a common feature of many orchids and the word "orchid" itself comes from the Greek "orchis" meaning testicle.

GREENHOOD ORCHIDS Pterostylis species.

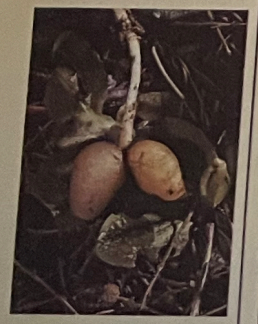
There are about forty species of Greenhood orchids found all over Victoria. The fact that they are so widespread, and in some areas, so abundant makes it certain that their tubers were gathered by Aborigines. Although small, the tubers are starchy and nutritious.

SUN ORCHIDS Thelymitra species.
DOTTED SUN ORCHIDS Thelymitra ixioides.

Sun orchids have symmetrical petals so they look more like lilies than orchids. They can be found all over Victoria, sometimes in quite dense patches. In common with other ground orchids, they flower in spring, sending up their scented six lobed blooms on one or two flowering stalks. The paired Sun-orchid tubers have a high concentration of starch.

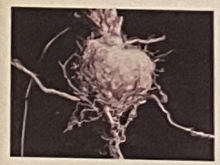


Greenhood Orchids sheltering near the base of a tree. Greenhoods often grow in abundant patches.



The tubers of Greenhoods usually grow like this, in pairs. The plant dies back in summer, surviving on its underground store of starch, to flower once again in spring.

According to botanist and author Tim Low, Sun Orchids produce some of the starchiest of tubers. These beautiful spotted flowers open with the light.



Native Geranium roots, collected from western Victoria. Aboriginal women pounded them before cooking to break down the fibrous texture

PLANTS WITH TOUGH ROOTS
NATIVE GERANIUM, CRANE'S BILL Geranium 5 Species with tuberous roots
TERRAT Coranderrk
KULLUMKULKEETCH *Tjapwurong*
KAWURN KALLUMBARRANT *Gunditjmara*

Native Geraniums have tuberous roots, either branched or single and tapered, like a radish. The roots contain nutritious starch and can be eaten after cooking but they are quite tough and need to be pounded first. Some are also high in tannin, making them unpalatable.

Geranium plants have soft leaves and pink flowers. They are found throughout the state.

BLUSHING BINDWEED, Convolvulus erubescens
TAROOK *Gunditjmara, Tjapwurong*

The name "tarook" was used by the *Gunditjmara* and the *Tjapwurong* people to describe the root of this creeping herb, and also the root of the Small leaved Clematis, both of which are very tough and starchy, suggesting that "tarook" was a general term. Bindweed roots would certainly have to be cooked before eating.

The fragile pale flower of Convolvulus or Bindweed signals the existence of tough edible roots

Bindweed is a perennial plant, mostly found in dry open areas across Victoria.

The tough knotty root of Clematis microphylla.

SMALL-LEAVED CLEMATIS Clematis microphylla
TAARUK, CHARUUK (root) *Gunditjmara, Tjapwurong*
MURPIT (cooked roots)
MO-U-EE Lower Murray

This dense climber has a long thick and fibrous root which was cooked first, then kneaded into dough by the Aborigines of the western district. It is a common plant all over Victoria.

These Cherry Ballarts were picked in the bush near Healesville. Although common in the bush around Melbourne, the tree rarely bears much fruit.

FRUITS AND SEEDS
CHERRY BALLART, NATIVE CHERRY Exocarpos cupressiformis
PALATT, BALLOT Lake Condah
PUL-LOITCH *Jajowerong*

The so called Native Cherry excited a lot of interest and comment from English settlers who liked its taste but saw it as an example of the upside down strangeness of Australia's plant's and animals. Instead of having its stone inside the fruit, this strange antipodean version carried its stone on the outside. In fact, the Ballarts, (Exocarpos species), of which there are six varieties in Victoria, bear no relation to the European cherry. The "fruit" is actually a

swollen red stalk or pedicel on which the real seed-bearing fruit grows. This is a very sensible arrangement, since the plant relies in part on dispersal by birds, and to get at the juicy stalk they inevitably swallow the small seed in front of it too.

The native cherry grows throughout eastern and southern Australia, in open eucalypt forests. It looks like a small cypress tree, having no leaves, and very small green flowers. The fruits are juicy and sweet, but grow rather sparsely. Aboriginal people would have enjoyed them as a springtime snack. It is not known whether they also ate the hard oily seed.

The wood was used for spearthrowers and bullroarers.

PIGFACE Carpobrotus species
KEENG-A *Bunganditj*
KATWORT Gippsland

Before the advent of sheep and cattle, pigface grew abundantly across Victoria's northern plains. Both the fruit and the thick juicy leaves were important Aboriginal foods. Edward M. Curr makes mention of the rapid destruction of these fields of pigface under the hooves of sheep and cattle during the 1840s in his journal:

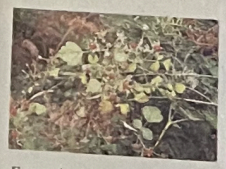
"The plain, for the thirty miles we followed it, from the Campaspe to Mount Hope, was one bed of ripe fruit, some juicy and some dried like raisins. As often, however, as I crossed the same country afterwards, I never again saw the pigs' faces ripe, so that I fancy that they only came to maturity in exceptional years. The plant is now nearly, if not quite, extinct in that locality."

The red fruits which ripen in summer are quite sweet. The green leaves were also eaten raw, as a salad.

Carpobrotus modestus, the inland Pigface which produces sweetish glutinous fruits.

Delicate flower and unripe fruit of Solanum laciniatum, a species of Kangaroo Apple mostly found in higher rainfall areas.

Ripe Kangaroo Apples (S. laciniatum). The fruit is first green, turning to yellow then dark orange when fully ripe.



Found over most of Victoria in damp places, the Native Raspberry, Rubus parvifolius. This bush was photographed at Framlingham.

Long furry fruits of the Common Appleberry, collected from Hurstbridge.

KANGAROO APPLE Solanum laciniatum
MOOKITCH, MAYAKITCH Lake Condah

The plants which make up the genus Solanum to which Kangaroo Apples belong includes important food plants the world over. Among the more than 1500 species are potatoes, tomatoes and eggplants. In Australia, Kangaroo Apples were an important Aboriginal food in the north as well as the south-east. This species grows in open forests and has vivid purple flowers and lobed leaves. Like other Kangaroo Apples, the fruit must be very ripe before it is eaten.

SMALL-LEAVED BRAMBLE NATIVE RASPBERRY Rubus parvifolius
BARRING-GOOTCH *Tjapwurong*
EEPAEEP Coranderrk

Australia has a number of native raspberries, all closely related to the European variety with a similar very enjoyable sour-sweet taste. This pink flowered raspberry grows in open woodland in Victoria, but is under attack from the imported blackberry which occupies the same ecological niche.

COMMON APPLE-BERRY Billiardiera scandens
KARRAWANG Coranderrk

A small climber with hanging yellow-green bell shaped flowers, followed by oval fuzzy fruits. The fruit is green with a red tinge and contains many black seeds. When soft enough to eat, they fall from the branches. Common Apple-berry is found in drier forests. The Purple Apple-berry has a drier purple fruit and is found in cooler wetter forests. Both species are easily cultivated.

Another species, the Sweet Appleberry, is often grown in gardens for its beautiful mauve flowers. Sweet Appleberry is a dry country plant with a more juicy fruit.

There are many Australian heaths, most with sharp leaves and small edible fruits which Aboriginal people enjoyed. This Cranberry Heath was photographed in the Grampians.

CRANBERRY HEATH Astroloma humifusum
BAGUD *Wergaia*, near Lake Hindmarsh

A small ground-hugging shrub with with very sharp pointed leaves, and red heath-like flowers. The green fruits appear in spring and early summer and have a sweetish pulp surrounding a quite large hard stone. Maiden noted in 1898 that "the fruits of these dwarf shrubs are much appreciated by schoolboys and Aborigines". A widespread species in open forest and heath.

HONEY POTS Acrotriche serrulata
BURGIL-BURGIL Coranderrk

Under the narrow pointed leaves of this low shrub are clusters of tiny waxy flowers containing beads of sweet-scented nectar - hence the name "Honey pots". The flowers appear during winter, followed by small green fruits like miniature apples. The fruits were also eaten.

Both flowers and fruit of this native heath Acrotriche serrulata are edible. Aborigines ate the tiny flowers for the beads of sweet fragrant nectar they contain.

RUNNING POSTMAN Kennedia prostrata
KABIN Coranderrk

A ground-covering creeper with rounded leaves growing in threes. The leaves have dark curly edges and are said to have been used as a tea substitute by early settlers. The flowers are a bright pillar-box red, hence the name "Running Postman". Aboriginal people sucked the nectar from the yellow centres of the pea-flowers and in NSW they used the long trailing stems as ties.

Pillar-box red nectar bearing flowers of Running Postman.

Acacia mearnsii or Black Wattle in flower. The tree had many uses for Aborigines, prime among them as a supplier of gum.

BLACK WATTLE Acacia mearnsii
WARRARAKK *Tjapwurong*
CURRONG Lake Condah
GARRONG *Wurrundjeri*

This wattle was an important source of gum, which for Aboriginal people had many uses. Gum will ooze from fissures or cuts which occur naturally, but in the western district, the Aborigines notched the trunks in autumn to increase the flow. They collected the gum and rolled it into balls, for dissolving in water with flower nectar to make sweet drinks, or just for eating on its own. It was also said by some observers to have been mixed into a kind of cement by combining it with ashes or burnt shells. The bark of the Black Wattle was laid in water which was heated at the edge of a fire to make an infusion for the treatment of indigestion.

Black Wattles are common in southern Victoria. They have attractive fine foliage and pale yellow flowers which come into bloom in early to mid-summer.

Golden Wattle, the floral emblem of Australia.

GOLDEN WATTLE Acacia pycnantha
KARRANK *Gunditjmara*
TUNLINE *Tjapwurong*

The large fluffy flowers of the Golden Wattle may be seen all over Victoria in early summer. The gum from this tree, like that of the Black and Silver Wattle, was eaten or used to make flavoured drinks. The bark is fibrous and high in tannin.

Auntie Liz (Elizabeth Hoffman) at the Darnya Centre with two Cultural Officers, Hilda Stewart (centre) and Greta Morgan. One of the sedges used in Victorian Aboriginal baskets grows in the grounds of the centre. This one is Juncus ingens, or Giant Rush.

A wealth of knowledge about effective plant remedies was lost during the time Aboriginal people were forbidden to practise their culture. Many herbs gathered for use in traditional Aboriginal medicine grew around fresh water creeks or springs like this one near the Hopkins River at Framlingham.

MEDICINES

Aboriginal people used a multitude of herbal medicines, of which some knowledge survives, although much more was probably lost when people were forbidden to go into the bush to collect healing plants and apply traditional remedies.

It is known that aromatic plants such as River Mint and Old Man Weed were often used for coughs, colds and chest complaints while plant parts containing tannins such as the gum from gum trees and different kinds of wattle bark were used for stomach complaints and burns.

Medicines were prepared and administered in a number of ways, and these can be broadly characterised as:

Infusion: the plant was soaked in hot water and the water taken as a drink or used to bathe the affected part of the body.

Steaming: A steam bath was prepared by lining a hole with hot stones and aromatic leaves such as gum leaves or River Mint. The patient was placed in the hole and covered with possum skin rugs.

Smoking: Herbs or leaves of trees were placed over a fire and the person to be treated was wreathed around by the smoke.

Poultices: The plant parts were ground up and applied as poultice, sometimes mixed with ash.

Binding around the head: Aromatic plants were sometimes worn as a band around the forehead so that the oils could be inhaled.

The Murray River squatter Peter Beveridge observed the use of vapour baths for "pulmonary affections and rheumatic fever" :

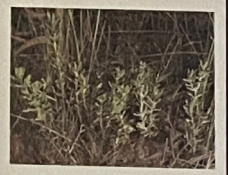
"The bath is contructed in a similar manner to their cooking ovens, the only real difference being simply that the hole for the bath is made sufficiently large to contain the body of the patient...When the hole has been sufficiently heated, the ashes are scraped out, and the damp green boughs nicely spread, upon which the patient is carefully placed. He is then covered all over by an opossum cloak, with the exception of his face which is left bare. Then all over the cloak earth is spread of a thickness capable of retaining the steam without weighing too heavily upon the patient. During the progress of the bath, the perspiration exudes from the face in great globules, and the hair becomes quite wet from the same cause. When the banyal or wise man of the tribe, thinks that the patient has been baked enough he is removed from the pit, carefully and expeditiously rubbed dry, after which he is closely rolled up in cloaks and laid so that a breath of wind cannot reach him".

"Even today, there's still plenty of medicines and traditional food in the forest. It's a very rich area, along the Murray. There's still plenty of medicine here. Traditional medicine was plants, leaves and bark you could boil up and inhale, especially bark. Bushes you could eat for headache. Aborigines were very clever people. Their medicine and ways of living were simple to them."

Uncle Colin

"Old Man Weed is what we use for medicine. Today we boil it. It's used for all kinds of ailments. It tastes horrible but it's very good. It got its name because it's a very wise kind of plant, like an old man. It'll cure just about anything."

Wally Cooper



Old Man Weed, Centipeda cunninghamii, growing near Reedy Lake, Central Victoria. Probably the best known Koorie medicinal plant, it is still boiled down and used by Koories for all kinds of ailments. A related species which also grows in Victoria is used medicinally in India, China and the Phillipines.

Flat leaves and fluffy blossoms of the acacia known as Blackwood, one of the many wattles with multiple uses. The bark was used in Aboriginal medicine.

MEDICINAL PLANTS

COMMON SNEEZEWEED, "OLD MAN WEED" Centipeda cunninghamii
GUKWONDERUK Lake Hindmarsh

"Old Man Weed" has a powerful reputation among Aboriginal people as a curative plant. A small green herb with soft aromatic leaves, Old Man Weed grows along the sides of creeks and on flood plains, especially along the Murray River. To prepare the tonic, used for colds and chest complaints including tuberculosis, and as a general restorative, big bunches of the plant are gathered and boiled down. The resulting black decoction can then be bottled and kept for some time. Going on a course of "Old Man Weed" requires some care. To start with, one takes only one or two teaspoons full, gradually progressing to something like half a cup a day. It can also be rubbed on for skin complaints.

Before they had metal cooking pots, Aboriginal people would have prepared "Old Man Weed" by boiling or soaking the herb in very hot water in a wooden or bark vessel at the edge of the fire.

BLACKWOOD Acacia melanoxylon
MOOTCHUNG *Tjapwurong*
BURN-NA-LOOK *Yarra*

Blackwood bark was used as a treatment for rheumatism. It was first heated over a fire and then infused in water for bathing aching joints. Aborigines also made use of the hard wood which has a beautiful grain and takes a fine polish. They fashioned it into spear-throwers, shields and clubs.

This tall wattle tree has pale yellow blooms which appear in spring. It is a common tree of higher rainfall areas.

Pink translucent fruits of one of the mistletoes - Amyema preissii. The fruits were eaten raw and the leaves probably used medicinally by Aboriginal people in Victoria as well as Queensland.

MISTLETOES
Amyema, 6 species
Lysiana, 1 species
Muellerina, 2 species
There are records of Aborigines in Queensland using Mistletoe leaves to line steam baths, and also of the crushed leaves being steeped in water to make a potion for curing fever.

Mistletoes are parasites. They attach themselves to the branches of wattle and gum trees, and in some cases destroy their hosts. They all produce very sticky fruits, white, pink or brown, which are spread by birds and can also be eaten.

River Mint, used in traditional Aboriginal medicine for coughs, colds and headaches.

Fruits and leaves of the parasite Grey Mistletoe, another plant whose leaves were crushed in water to make a healing drink.

RIVER MINT, Mentha australis
POANG-GURK? "bad smell" *Tjapwurong*

There are four native mints (Mentha species) which grow in Victoria. These small herbs have aromatic leaves smelling like Pennyroyal and usually grow in forests near streams or waterholes. Aboriginal people crushed and inhaled the plant for coughs and colds and sometimes used the leaves in earth ovens to add flavour to cooked food. River Mint is found throughout the state.

The aromatic leaves of Clematis were crushed as an inhalant but are said to blister the hands if rubbed too hard.

SMALL-LEAVED CLEMATIS Clematis microphylla, Clematis glycinoides
TAROOK *Gunditjmara, Tjapwurong*

The young roots of Clematis species have a fiery taste and the leaves can cause blistering if there is prolonged contact with the skin. Clematis glycinoides which is a climber of

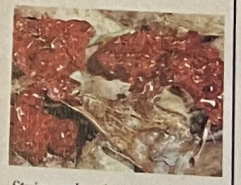
Gippsland forests was called "headache vine" in Queensland and was probably used by Victorian Aboriginal people in the same way - inhaling the essence of the crushed leaves to relieve pain in the head.

The roots were eaten after pounding and cooking and the root fibres made into fine string from which headbands were woven.

White flowers and typical three-part leaves of Zieria or Stinkwood. This plant was found in the Black Spur.

STINKWOOD Zieria arborescens
SANDFLY ZIERIA Zieria smithii

Tall shrubs with three-part leaves which have an unpleasant smell when crushed, and white to white-pink flowers. The Tasmanians bound the leaves around the head to relieve pain and headache, and in Queensland the leaves were crushed and inhaled for headaches. This plant is found in moist forests.



Stringy-bark gum oozing from fissures in the trunk falls on leaves around the base of the tree. Gum from many eucalypts contains tannin, an astringent, which was dissolved in hot water and used for medicinal purposes.

RIVER RED GUM Eucalyptus camaldulensis
PEEAL *Tjapwurong*
BE-AL Melbourne
TA'ART *Gunditjmara*
DHARNYA *Jota Jota*

When we think of typical Australian vegetation, we invariably think of gum trees. No other continent is so emblematically linked to a particular botanical species, a reflection of the fact that there are actually 500 different species of Eucaluptus in Australia, growing in almost every environment. Victoria has 80 species, of which the majestic River Red-gum, found along every river's edge, is the most wide-spread of all.

Apart from its importance in providing bark for shelters, canoes and shields, the sap or gum which has a high tannin content, was used to shrink and seal burns. It may also have been mixed with water and taken as a remedy for diarrhoea. Like other Eucalypt leaves, Red Gum leaves were used in aromatic steam baths for a variety of illnesses.

MANNA GUM Eucalyptus viminalis
BINNAP *Yarra*
YULONG? *Tjapwurong*

The long thin leaves of the Manna Gum were laid on fires and the smoke was believed to reduce fever. Young leaves of this species of Eucalypt sometimes contain extremely poisonous cyanide compounds, so treat them with caution.

The roots of Native Geranium were used to treat diarrhoea.

CRANE'S BILL, NATIVE GERANIUM, Geranium species
TERRAT Coranderrk
KULLUMKULKEETCH *Tjapwurong*
KAWURN KALLUMBARRANT *Gunditjmara*

The five species of Native Geranium can be recognised by their distinctively shaped leaves and small pink flowers. The roots sometimes contain considerable amounts of tannin and were used to treat diarrhoea.

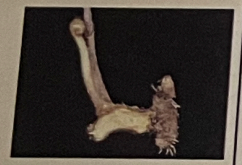
A single Hollyhock plant, found growing at Lake Cooper. Aboriginal people used the sap for treating boils.

AUSTRAL HOLLYHOCK Lavatera plebeia

The sticky viscous sap of this shrub was used as a treatment for boils. Hollyhock is found along the coast and around water in the western part of Victoria where the climate is fairly dry.

BRACKEN FERN, AUSTRAL BRACKEN Pteridium esculentum

The young juicy stems of Bracken Fern were rubbed on to relieve the stinging and itching of insect bites.



Young Bracken shoot, an Aboriginal remedy for mosquito bites.

Crushed blooms of the "Flea Flower" or "Self Heal" plant (Prunella vulgaris) are put under matresses and act as an insect repellant. This plant, common in Europe and used there as a herbal remedy, is also thought to be native to Australia.

Auntie Connie Hart photographed with some of the baskets she has made, together with a sheaf of Poong'ort. The finely woven bag in the foreground is 140 years old and also comes from the western district.

"I took up basket weaving because I liked the stitching. I liked the way my mum was making the baskets, and the way the people up at Framlingham made their baskets.They had different grass up there. Mum had fine grass down here - Poong'ort, and up there it was the water reeds, flatter grass.

I never really made a basket until Mum died. I must have been nearly up in my forties. But I came up to look after her and I'd walk up the road and see the grass, and then I remembered the stitch - I tried it, and after she died I took it up.. All those years, I never made a basket, but I knew how to do the stitch. I knew the grass."

Auntie Connie

FIBRE

Plant fibres were important for the making of string. To produce good string the fibres had to be freed from the other plant tissue by being heated, soaked and beaten or sometimes chewed. The two ply string was made by rolling the fibres on the thigh.

String was used to make articles of adornment like head bands and girdles. It was the essential material out of which nets were fashioned, some of these being of enormous length and requiring hundreds of metres of string. It was used also for fishing lines, for making net carry bags and for binding stone axe heads to handles and points to spears.

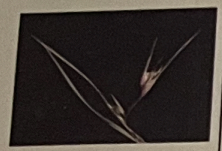
Some strings needed to be finer or stronger than others. Aboriginal people selected the appropriate plant for each purpose. For example, string from Cumbungi was very strong, while that made from Bushman's Bootlace could be made into very fine nets for winnowing Bogong moths. As well as string, whole and split leaves, stems and barks were used for making baskets, bark buckets, mats and shelter.

Peter Beveridge a squatter on the Murray in the 1840s was impressed by the skill of the local people in making string. He wrote:

"When we consider that these Aborigines do not possess any appliances other than those furnished by Dame Nature, it is truly wonderful how deft they are in the making of cord and twine.

They make these of sizes varying from the thickness of our clothes lines, down to the very thinnest twine. Whatever the size may be, the cord or twine in all cases consisits of two plies or strands only."

The following list represents only a small proportion of plants from which Aboriginal people extracted fibre.



The distinctive heads of Kangaroo Grass. Its fibres were made into string for bags.

KANGAROO GRASS Themeda australis
COMMON KANGAROO GRASS Themeda triandra Forssk
WUULOITCH *Tjapwurong*
WUULOT *Gunditjmara*
KARN (either the plant or a net made from it) Lake Tyers

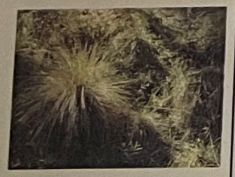
Kangaroo Grass was once common over much of Victoria's low-lying plains, but it was quickly destroyed by grazing animals. On rich soils, it grows luxuriantly to a height of one metre. The nineteenth century botanist Joseph Maiden claimed that "Horses keep in better condition on this grass, doing hard work, than on almost any other species of native grass" and Thomas Mitchell described it as "resembling a field of ripe grain."

Kangaroo Grass was used in the manufacture of fishing nets. Both leaves and stem yeild fibre for string. Along the Murray River at Yelta, the grass was steamed to extract the fibre. According to the Administrator of Lake Tyers, the Reverend Bulmer, the whole grass was used by Aboriginal people in Gippsland.

The seeds were ground and baked in NSW.

TUSSOCK GRASS Poa species (large tussock species)
BOWAT *Wurundjeri*

The fibre from these tough grasses was used to make string for nets and for bags, baskets and mats.



Tussock Grass, growing at Ballak Willam, South Belgrave.

GRASS TREES, Xanthorrhoea species
BUKKUP *Gunditjmara*
KAWEE *Tjapwurong*
BAGGUP *Wurundjeri*

Not exactly a fibre plant, but important as a source of resin, the grass tree most common in Victoria is Xanthorrhoea australis. Grass-trees flower in response to fire, bearing nectar filled white flowers on a tall brown stalk.

Firemaking - Aboriginal men could start a fire quickly with carefully chosen equipment. This picture shows a base made from Grass-tree stem and two types of fire stick used in Victoria, Hedycarya augustifolia (top) and Prostanthera lasianthos or Victorian Christmas Bush.

Leaves of the Spiny-headed Mat-rush were woven into fine baskets and mats.

Black Anther Flax-lily, (Dianella revoluta). Flax Lily leaves were split and twisted into ties.

In Victoria, the most common species of Grass-tree is Xanthorrhoea australis. For Aboriginal people, it was a plant with many uses. Some parts, like the soft bases and growing points of young leaves and the succulent roots were eaten. The long flowering stalk produced nectar and also served as a butt-piece for spears. Pieces of flower stalk when fully dried out were used as a base for making fire with a drilling stick.

Although not exactly a fibre plant, Grass-trees were very important in the production of Aboriginal tools. The leaves produce a hard waterproof resin which was collected from the base of the trunk. The resin melts when warmed but sets hard when cold and was used to cement stone axe heads to wooden handles and spear tips to spears.

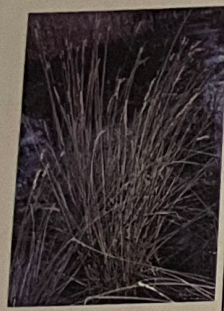
SPINY-HEADED MAT-RUSH Lomandra longifolia
KARAWUN *Wurundjeri*
BALLANG-COWAT String bag

Mat rush leaves were used for making baskets. The method followed in the baskets made by Mrs. Thelma Carter is as follows: the leaves, once picked are split down the centre into two and left to dry for 3 or more days. Before being worked, they are dampened with water for 24 hours to render them pliable.

Many baskets in the collection of the Koorie Heritage Trust are woven from Mat Rush.

FLAX LILY Dianella species
MURMBAL (Dianella revoluta) Lake Hindmarsh

The leaf was split into two down the midrib and rolled in the manner of string to make a tie.



Aboriginal women have used this sedge, Poong'ort, for making baskets in the Lake Condah area for at least three generations.

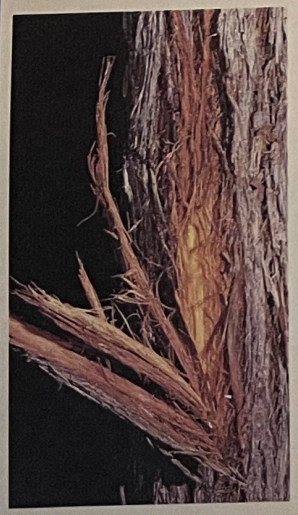
SEDGE Carex tereticaulis
POONG'ORT Connie Hart
BUNGORT Cummeragunga
BUNGUD *Wemba Wemba*
BOONGOOR fibre rush *Wati Wati*
BOONJURT wire rush, Lake Boga

This plant grows in most areas of the state in damper regions. It has particularly strong fibres running along the length of the stems which allow it to be split into fine long sections for basket making.

Mrs. Connie Hart of the Lake Condah area has revived the art of making traditional baskets with Poong'ort by recalling her mother's basket work at Lake Condah Mission in the 1920s. Although fibre artefacts decay too quickly to provide archeological evidence, it is almost certain that the tradition of weaving with Poong'ort spans many generations.

MESSMATE STRINGYBARK Eucalyptus obliqua
WANGNARRA *Wurundjeri*
WARNGAR stringybark tree, *Tjapwurong*

This large tree is found in open forest with relatively high rainfall. In common with other species of stringybarks, it has an outer brittle bark which was powdered to serve as tinder to catch sparks in fire making. The inner bark was used to make a type of coarse string for bags and fishing nets.



Showing the rough fibres, this photo of Stringybark was taken at Kangaroo Ground.

Hollyhocks have either pink or white flowers. Pictured here, the pink variety growing at Erith Island, Bass Strait.

Fibres extracted from the stem of the Austral Hollyhock.

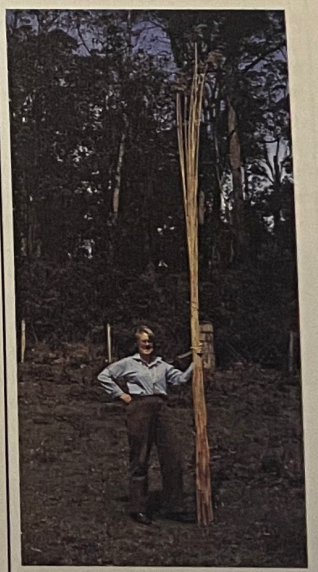
A noteworthy bag made of the bark of this particular Stringybark (Eucalyptus obliqua) was sent to Brough Smyth and he described it in the 1870s as "thirteen inches in length and four inches in depth, when not extended. It is elastic, and would contain a great quantity of goods if necessary... It is strong and well twisted".

AUSTRAL HOLLYHOCK Lavatera plebeia
GNURITCH *Tjapwurong*

Hollyhock fibres are fine and silky, but it takes a number of steps to separate them from the outer layers of the stems. Aboriginal people first baked the stems, then beat and scraped them. Sometimes the baked stems were chewed until only the fibres remained. Fine string for headbands, waistbands and net bags was made from Hollyhock fibres.

COMMON REED Phragmites australis
CHARR-AK *Jajowerong*
KAERK *Tjapwurong*
TAARK, TAERK *Gunditjmara*
JAARK Lake Boga
DJARG *Wemba Wemba, Wergaia*

The Common Reed can be found all over Victoria, often in dense stands at the edges of rivers and creeks. It sends up tall straight flowering stems with pale brown feathery tops. The leaves and stalks are similar to Bamboo and like Bamboo, the plant spreads by horizontal underground stems and is a prolific grower. The underground shoots can be eaten and taste like Bamboo shoots.



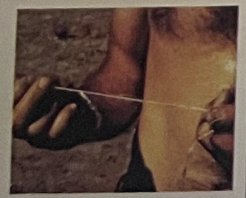
The length to which stems of the Common Reed grow can be seen in this picture of Beth Gott taken at Boulder Flat, east Gippsland.

"My mother didn't want us to learn anything that was Aboriginal, not even the basket weaving. I suppose she could see what was happening and she didn't think it would do us any good. That's why I watched and I taught myself. I watched people at Purnim, all those old people up there. I'd go and sit amongst them and watch them doing it. But if I asked any questions, they wouldn't tell me - they'd tell me nothing.

All those old people seemed to have the same idea - don't tell us young people nothing.

I think I've taught about thirty people basket weaving now. Even little kids, they'll come and sit down here and be taught. I think it's very important, it's our culture."

Auntie Connie



String twisted from Cumbungi fibres is very strong and resists rotting. All twine was two-ply.

For Aboriginal people, reeds had many cultural and practical uses. The fine straight flowering stems were used as spear shafts, and the leaves twisted into a rope from which durable soft baskets of varying sizes were woven , Sections of the hollow stems were strung into reed necklaces or used as nose ornaments, and in Gippsland the sharpened ends of the stems were made into knife-like instruments for skinning animals .

In the 1870s, Brough Smyth noted that the reed "grows abundantly on the banks of the Rivers Yarra and Goulburn" and that it was used for making the many kinds of bags and baskets used by the women "to carry all their little treasures in when they are travelling".

Of reed spears along the Murray Peter Beveridge wrote:

"The reed spear is the missile most generally used in their daily foraging; this spear can be thrown with great precision fifty or sixty yards; it is propelled by means of the throwing stick. They kill all the smaller game such as wallaby, duck, geese, swans, pigeons etc. with this weapon... This spear is seven feet long, five feet of its length being reed, and the other two feet wood, hardened by fire."

CUMBUNGI, BULRUSH Typha species
POORTEETCH *Tjapwurong, Gunditjmara*
IOONTY (from Beveridge) young shoots

In the Lake Boga district, there were six separate names for different parts and conditions of the plant - an indication of its importance in the culture. As well as being a nutritious starch laden food, the underground stems or rhizomes contain fibre which could be made into very strong and durable string. After steaming the roots, the outer skin was removed and the fibrous interior tied into a knot which was then chewed until all the starch was removed, leaving only the fibres. These were dried and stored. Before being rolled on the thigh into string, the fibres were soaked again to soften them and scraped with mussel shells.

Peter Beveridge describes the process thus:

"The Kumpung (Typha) root, furnishes the fibre most commonly employed in the making of thread from which waist-belts, brow-bands, and bags of all sorts and sizes are netted.

...each root is taken separately, the skin peeled off, and the remainder, consisting of both farina and fibre, is twisted up into a knot, often being larger than a good sized fist... When one of these immense mouthfuls has been masticated sufficiently to extract all the farina, the residue, which is the fibre, is rejected in the shape of a small knot of beautiful white tow."

The string produced from Cumbungi fibres was made into very large nets, up to 180 metres in length.

WATTLE, ACACIA, MIMOSA Acacia species

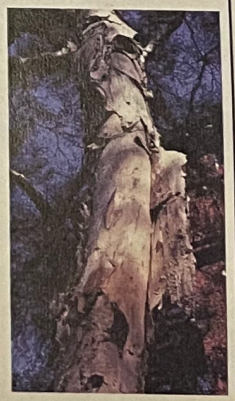
Almost all parts of these plants were used in some way - the green seed pods cooked and eaten, the dry seeds ground into flour, the gum as food or mixed into drinks. Gum was also taken as medication for dysentery or applied to wounds. A decoction of the bark was applied to boils and to treat venereal disease. Some wattle barks were put into water to stun fish and make them easy to catch. The Tasmanians hung the blossoms in their huts to help them sleep. The inner bark of numerous Acacias or Wattles were utilised in the making of string.

Wattles were destroyed in large numbers because of the valuable tannin in the bark. Europeans stripped the bark to tan cattle and sheep hides in Australia and also exported quantities to overseas tanneries.

PAPER-BARK, HONEY-MYRTLE, Melaleuca species.
BUNU (Melaleuca species)
GUTCHAMUL (M.halmatuorum)
GUTYAMUL (M. decussata)
DYURR (M.uncinata) All Lake Hindmarsh names.

The papery soft bark of some Melaleucas was stripped off in pieces and used like cloth to wrap babies. Melaleucas produce a variety of timbers, many of them hard and tough enough to be suitable for making spears, clubs and digging sticks.

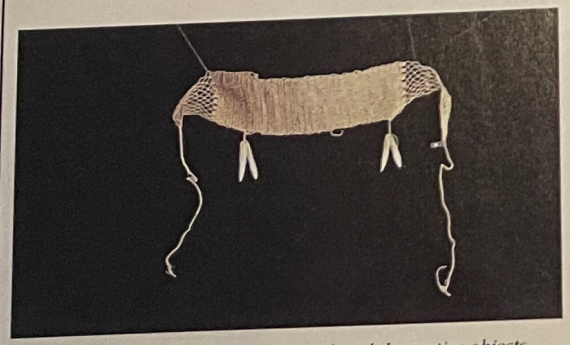
The flowers or "bottle-brushes" may have been used for nectar. There are 13 species of Melaleucas in Victoria, and all but two grow in the south-west of the state.



Soft sheets of Paper-bark were used like cloth or paper for wrapping babies.

A close view of the very fine fibres of the bark of the Pimelia bush. Because of its strength this plant was called "Bushman's Bootlace"

Net bags like this one were used by Aboriginal women to carry a variety of personal belongings and also for gathering roots and other edible plants.
Museum of Victoria collection, courtesy Museum of Victoria Council



Aboriginal people made both practical and decorative objects from plant fibres. This beautiful headband decorated with kangaroo teeth has been woven with very fine string and dates from the 1880s.
Museum of Victoria collection, courtesy Museum of Victoria Council

GARDENS FOR VIEWING ABORIGINAL PLANTS

BLACKBURN LAKE SANCTUARY VISITOR CENTRE
City of Nunawading.
A leaflet is available for for visitors, describing local plants. Contact Dorothy Meagher on 873 2619 for group bookings.

MONASH UNIVERSITY GARDEN, situated in front of the Biology Building, can be viewed at all hours. All plants are labelled and a free pamphlet is available during office hours

JELLS PARK. The visitor centre at the park has information about the pre-European history of the park. A revegetation program has begun.

MERRI CREEK. A revegetation program has begun and can be viewed along the creek, from the Yarra River upwards.

SANDRINGHAM COUNCIL GARDEN, on the corner of Bluff Road and Royal Avenue, Sandringham. Plants are well labelled and the garden can be viewed at any time.

VICTORIAN SCHOOLS' NURSERY, 585 Waverley Road, Glen Waverley has plantings characteristic of various Victorian regions, as well as plants used by Koories.

WEEROONA GARDEN, 8 Lee Street East Brunswick has Koorie plants. For information, call 389 4100. (Brunswick Electricity Supply)

CERES INDIGENOUS NURSERY has plants used by the local Wurundjeri people available for purchase.
Lee Street, East Brunswick next door to Weeroona Gardens.

MARUNG Bush Tucker Area, Swan Hill North Primary School is developing a garden of local Koorie plants.

ROYAL BOTANIC GARDENS, South Yarra has many plants which were utilised by Aboriginal people from all over Australia. Labels do not identify these plants specifically, but a guided walk can be arranged by contacting the gardens.

NATIONAL BOTANIC GARDENS in Canberra has an Aboriginal Trail. There is a leaflet available and plants are clearly labelled.

WURUNJERI GARDEN, Glen Avon Rd, Hawthorn. A newly opened garden, set up with the assistance of the Wurundjeri Tribelands Co-operative. An explanatory pamphlet and map for the walk is available.

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PHOTO ACKNOWLEDGMENTS

p ix MoV Photography
p 3 Frank Coffa
p 4 Frank Coffa (shell midden pic)
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Over 900 plants have been recorded as having been used by Aboriginal people in Victoria alone. Many of these were food plants, gathered as part of the rich and varied diet Aborigines enjoyed in south-eastern Australia before colonisation. As well as food, Aborigines used plants to make weapons, canoes, nets and baskets. In Victoria's forests they knew where to find vines which cured headaches of reduced fever. Other plants yielded fibres as fine as silk, or grew extraordinarily straight branches which were perfect for fire making. Travelling through the dry scorched Mallee, Aboriginal people knew exactly which plants held water under the desert floor and how best to obtain it.

This book takes a fascinating journey through the human history of Victoria's native plants. It contains over 150 colour photographs of plants traditionally important to the Aboriginal people who managed the natural resources of this abundant region for thousands of years.

About the Trust

The Koorie Heritage Trust was established in 1985 to develop an awareness and appreciation of Victorian Aboriginal culture and to promote mutual understanding and respect between all Australians. The Trust collects, conserves and displays contemporary Aboriginal art and craft and historical cultural material at the Museum of Victoria and Aboriginal Keeping Places throughout Victoria. It maintains a travelling exhibition of Victorian Aboriginal history and culture and has recently published *Koorie*, an illustrated Aboriginal history.

Koorie Plants Koorie People – Winner of the CAMA Regional Museum book award for 1993.

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